Part.A
Jhelam District Gazetteer.
Edn, 1883-1884.

GAZETTEER

OF THE

JHELAM DISTRICT.

1883-4.

Compiled and published under the authority of the

PUNJAB GOVERNMENT.

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PREFACE.

THE period fixed by the Punjab Government for the compilation of the *Gazetteer* of the Province being limited to twelve months, the Editor has not been able to prepare any original matter for the present work ; and his duties have been confined to throwing the already existing material into shape, supplementing it as far as possible by contributions obtained from district officers, passing the draft through the press, circulating it for revision, altering it in accordance with the corrections and suggestions of revising officers, and printing and issuing the final edition.

The material available in print for the *Gazetteer* of this district consisted of the Settlement Reports, and a draft *Gazetteer*, compiled between 1870 and 1874 by Mr. F. Cunningham, Barrister-at-Law. Notes on certain points have been supplied by district officers ; while the report on the Census of 1881 has been utilised. Of the present volume, Section A of Chap. V (General Administration), and the whole of Chap. VI (Towns), have been for the most part supplied by the Deputy Commissioner ; Section A of Chap. III (Statistics of population) has been taken from the Census Report ; while here and there, and especially in the matter of ancient history, passages have been extracted from Mr. Cunningham's compilation already referred to. But, with these exceptions, the great mass of the text has been taken almost, if not quite verbally from Mr. Thomson's Settlement Report of the district.

The draft edition of this *Gazetteer* has been revised by Cols. Wace and Parsons, Capt. Hutchinson, and Messrs. Maconachie and Thomson. The Deputy Commissioner is responsible for the spelling of vernacular names, which has been fixed throughout by him in accordance with the prescribed system of transliteration. The final edition, though completely compiled by the Editor, has been passed through the press by Mr. Stack.

THE EDITOR.

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1	2	3	4	5	6
DETAILS.	DISTRICT.	DETAIL OF TAHSILS.			
		Jhelam.	Pind Dádan Khán.	Chakwál.	Tallagang.
Total square miles (1881)	3,734	876	760	960	1,138
Cultivated square miles (1878)	1,475	277	266	470	462
Culturable square miles (1878)	458	69	132	146	111
Irrigated square miles (1878)	39	13	15	7	4
Average square miles under crops (1877 to 1881)	1,267	319	290	337	321
Annual rainfall in inches (1866 to 1882) ...	21·7	21·7	18·6	15·2	19·2
No. of inhabited towns and villages (1881)	956	421	211	240	84
Total population (1881)	589,373	174,169	166,186	154,144	94,874
Rural population (1881)	528,264	153,062	149,462	143,347	82,393
Urban population (1881)	61,109	21,107	16,724	10,797	12,481
Total population per square mile (1881)	151	197	166	188	79
Rural population per square mile (1881)	135	173	148	175	69
Hindus (1881)	60,949	17,465	21,713	14,487	7,284
Sikhs (1881)	11,188	3,424	1,091	5,122	1,551
Jains (1881)	58	...	58	...	...
Musalmans (1881)	516,745	152,916	143,273	134,534	86,022
Average annual Land Revenue (1877 to 1881) *	655,265	176,901	184,356	194,138	99,870
Average annual gross revenue (1877 to 1881) †	806,928	...	...	...	...

* Fixed, Fluctuating, and Miscellaneous. † Land, Tribute, Local Rates, Excise, and Stamps.

JHELAM.

CHAPTER I.

THE DISTRICT.

Chapter I, A.

Descriptive.

General description.

SECTION A.—DESCRIPTIVE.

THE Jhelam district is one of the four districts of the Ráwalpindi division, and separates Ráwalpindi from Shahpur, forming the southern half of the rough hill country at the head of the Sind-Ságar Doab. It lies between north latitude 32° 26' and 33° 15', and east longitude 71° 51' and 73° 50'. On the north it is bounded by the district of Ráwalpindi, on the south by the river Jhelam and the district of Shahpur, on the east by the river Jhelam, and on the west by the districts of Shahpur, Bannu and Ráwalpindi. The shape of the district is roughly similar to that of a butcher's hatchet with a short thick handle at the west, and the edge of the blade turned southward. The extreme length from east to west is about 120 miles, while the average breadth from north to south is about 36 miles. The breadth is, however, liable to great variations. Near Jhelam city it is hardly twelve miles, but on the line drawn through Lilla and Dulla it is almost fifty-five. The superficial area has been variously estimated. The Topographical Survey of 1851—59, as subsequently corrected, gives 3,910 square miles; but in making the corrections some errors seem to have crept in. At the first Regular Settlement, Mr. Arthur Brandreth gave the area as 3,800 square miles; but the re-measurement made for the recent Settlement shows an area of 4,039 square miles. There has never been a Revenue Survey, and the country is a very difficult one to measure properly. The action of the river Jhelam is also a perpetual cause of variations, which are sometimes not inconsiderable. On the whole, an average area of 4,000 square miles is probably not far from the truth.

This large tract is divided into four tahsíls. Tahsíl Jhelam occupies the whole eastern end. All the west is engrossed by tahsíl Talagang. The central area between is held on the north by tahsíl Chakwál, and on the south by tahsíl Pind Dádan Khán. Some leading statistics regarding the district and the several tahsíls into which it is divided are given in Table No. I on the opposite page. The district contains two towns of more than 10,000 souls.

Jhelam	21,107
Pind Dádan Khán	16,724

The administrative head-quarters are at the town of Jhelam, which is very eccentrically situated in the extreme south-eastern corner of the district. There is usually an Assistant Commissioner

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General description.

stationed at Pind Dádan Khán, in charge of the Pind Dádan Khán and Talagang tahsíls.

Jhelam stands ninth in order of area and eighteenth in order of population among the 32 districts of the province, comprising 3·67 per cent. of the total area, 3·14 per cent. of the total population, and 2·50 per cent. of the urban population of British territory. The latitude, longitude, and height in feet above the sea of the principal places in the district are shown below :—

Town.	N. Latitude.	E. Longitude.	Feet above sea-level.
Jhelam	32° 56′	73° 47′	827
Pind Dádan Khán ...	32° 35′	73° 5′	731
Chakwál	32° 56′	72° 54′	1,550*
Talagang	32° 56′	72° 28′	1,530

* Approximate.

General Physical Character.

The Salt Range.

Round Jhelam itself there is a wide expanse of level plain which is prolonged into a narrower strip along the course of the river ; but elsewhere the surface is generally rough, broken, and disturbed. Much of it is covered by the mountains of the Salt Range and its tributaries. This range first enters the district at its extreme south-west corner, where the spurs of Mount Sakesar descend into the village of Láwa. The whole lower boundary of tahsíl Talagang is fringed by the northern ridges of the hills. Still, in this part of its course, the range keeps mostly to the district of Shahpur ; but when it reaches the boundary of tahsíl Pind Dádan Khán it passes altogether into the Jhelam district. Here it consists of two distinct lines of hills running west and east at a distance from each other of about five miles inner measurement. These are generally parallel to one another ; and each of them is made up of a number of parallel ridges. But this parallelism is modified by a marked tendency to a linked or looped formation. At intervals of about ten miles the two main lines of hills bend in towards one another, and mingle in a knotted mass. Then they again separate, again run parallel, and again unite. This is observable, not only in the range as a whole, but, though less regularly, throughout each of its separate components also. The general character of the whole is that of a double series of parallel ridges ; but the more intimate formation is rather that of a series of large loops or links enclosed by similar but smaller series.

The fashion of the hills.

The rocks which build up the range are throughout tilted at a very high angle ; but there are few peaks which are either detached or conspicuous. The general model is one unvaried ridge which has very much the fashion of a cliff. On one side an almost perpendicular surface drops down sheerly into the plain. On the other the slope, although severe, is much more gradual. It is an almost universal rule that the scarped surface faces to the southward. Thus the range is not unlike a double row of cliffs shutting off the rough north country from the alluvial plain of the Panjáb. This may serve to explain the great difference of level between the hither and the further plain. On the one side the mountains rise out sheerly from the low plain of the Jhelam river, which is rarely more than 700

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General appearance in various parts.

feet above the sea. On the other side they gradually sink down into a country which lies variously at from 1,300 to 1,900 feet above the sea level. With these differences of altitude in the surrounding country the appearance of the range differs greatly at different stand-points. From the south the view is dreary; the hills are almost entirely bare of vegetation; a few half-starved and sickly bushes only emphasize the general barrenness. Nor is there much grandeur of form. In fact, the east end of the range is decidedly tame; but towards the west, where the limestone rocks become predominant, there are often long lines of lofty cliffs. These are best seen in the narrow gorges which carry down the drainage of the interior upland to the Jhelam. Some of these possess much austere beauty. Perhaps the finest example is the Nílí Váhn near Kandwál. This is sometimes terrible in its apathetic desolation. On the north side of the mountains the plain country lies high, and the range has the appearance of a low, monotonous ridge. There is a fuller vegetation here. The long slopes of the hills are often covered with thick, low brushwood. *Báhikar, sinetta,* and *phuláhi* are most commonly met with. There is also a good deal of wild olive. Real trees are, however, very rare. Nor is this wonderful, for the rainfall is scanty, and it drains away almost immediately from the hill slopes. Often, too, the surface soil is merely bare rock or stony débris. The wonder is not that trees should be so few, but that such vegetation as there is should be able to maintain itself. The country within the range is much softer. The upland of which it consists lies so high that the hills are completely dwarfed, and a rich cultivation makes some amends for the absence of forest trees.

The Eastern Salt Range hills.

Near the east boundary of tahsíl Pind Dádan Khán the range has clearly been subjected to great disturbance. The northern hills, after culminating in the peak called Chel, which is the highest point in the district (3,701 feet), swing round to the southward in a broad sweep near the village of Phadiál. This lateral movement is continued until the whole chain reaches and is merged into its southern neighbour; but beyond this point of junction the southern hills themselves continue for about five miles till they reach the town of Jalálpur. They then wheel abruptly to the north-east, and follow a short course to the bank of the Bunhá torrent, where they terminate. The country interposed between the overlap of these two lateral ranges is generally known as the Wagh valley, after the principal village contained in it. And the hills which skirt this valley are generally looked upon as the furthest eastern extension of the Salt Range. But, as a matter of fact, either limb of the range is practically continued by a subsidiary line of hills right across the Jhelam tahsíl to the eastern boundary of the district. In the northern limb this continuity is almost absolute. Nearly opposite to the Chel, and at a distance from it of less than a mile, the great mass of Diljabba rises abruptly out of the plain country of Lundi Patti, and for some distance runs parallel to the general course of the Salt Range. But when the hills beyond the Chel sweep round to the southward, Diljabba takes no share in the movement, but follows its course uninterruptedly to the Ghori Gala pass. Here it joins the

Subsidiary hills.

Diljabba.

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The Nílí hills.

minor range which is generally known to Englishmen as the Nílí hills. From Ghori Gála these stretch east and north-east across the Jhelam tahsíl for a distance of twenty-four miles. Near the encamping ground of Soháwa they cross the line of the Trunk Road and of the Northern State Railway. Thence they dwindle rapidly. At Karuta, seven miles beyond Soháwa, they disappear. Two miles further on the district boundary is reached. The average height of these hills is about 2,500 feet above the sea, and their fashion and appearance do not differ from those of the Salt Range proper. For the native population they have no collective name, nor is there always a special name for each particular hill. Sometimes, however, such names are given. *Nílí* itself is really the name of the highest peak in the chain.

Tilla.

The continuation of the southern limit of the Salt Range is hardly less certain. The Wagh hills drop down sharply into the Bunhá torrent; but immediately opposite on the further bank the Tilla range at once begins its course. As seen from the west, the continuity of the two ranges can hardly be doubted; and what the surface of the country suggests is confirmed by the geological evidence. From the Bunhá these Tilla hills run eastward in general parallelism to the Nílí chain. They rapidly culminate in the supreme peak of Jogi Tilla. Thereafter they as rapidly decay, but as a series of low parallel ridges they are prolonged across the valley of the Kahán and the line of the Grand Trunk Road near Ráthian. A few miles further on they finally vanish, but at a little distance to the northward a new range at once springs into being in the hill called Batáli Dher, or the heap of stones which overlooks the encamping ground of Dina. It is very convenient to look upon this as a continuation of the Tilla range which has suffered some lateral displacement. From Batáli Dher this new range runs right up to the eastern boundary of the district near Dhangrot on the Jhelam. It is generally known as the Lehri hills, after the name of one of the chief "Mandis" or mother villages of the Ghakars Iskandrál. In one respect these hills are peculiar. Like the Salt Range they are generally scarped on one side and sloping on the other. But by what is almost, if not quite, a solitary exception in the district, the scarped surface is turned away from the river.

The Lehri hills.

Affiliated ravines.

Throughout all these ranges the main hills are frequently belted on one side or both by a broad band of hard clay ravines. These all run parallel to the mountains and to one another. They are often of considerable depth. They are built of a hard nodular marl, dusky-red in colour, and not unlike the refuse of a brick kiln. They are generally almost bare of vegetation. Viewed from above, their appearance is peculiar. They are like the successive waves of a shallow sea beating about the bases of the hills. These ravines are a class apart. They never occur far from the mountains, and near to them they are more common on the northern side than on the south. Ravines of other species are common all over the district.

Divisions caused by the hills.

The double range of hills above described divides the whole district into three physically distinct portions. The first of these lies below the hills, the second within them, and the third behind them. With-

The Riverain.

out pretence to strict geographical accuracy these might be termed the Riverain, the Upland, and the Plateau.

The Riverain is a broad alluvial plain spread out between the Jhelam and the hills. It stretches from Pindori, in tahsíl Jhelam to Pithrot in *zilla* Shahpur, and its length measured along the course of the river is nearly one hundred miles. Its average breadth is about eight miles; but this value is subject to great variation. Near Jalálpur the plain is a mere thread, but to the north, by Duliál, it spreads into a broad boss which pushes down a limb along the reverse side of the mountains, so as to fill up the area left vacant by the lateral displacement of the Lehri hills from the general line of Mount Tilla. This is the furthest extension northward of the Riverain country, and here near to the historic fortress of Rotás, and amid the low rich lands which fringe the course of the Kahán, it terminates. The whole tract is essentially a portion of the ordinary Panjáb plain.

Character of the Riverain.

Towards the centre it consists of fertile loam which gradually grows sandy as it approaches the river, and stony as it approaches the mountains. Its neighbourhood to the latter cause it to differ somewhat from other similar areas. It is seamed in all directions by the beds of hill torrents. Generally these torrents bring down fertilising floods, but sometimes they sweep away fertile ground, or bury it in a layer of unproductive sand. Very rarely new lands are thrown up, but these are generally small in area, poor in quality, and precarious in duration.

Eastern Riverain.

Beginning from the eastern corner of the district near the town of Jhelam, the country between the termination of the Langarpur hills and the river is a small and even, but slightly elevated, plateau of average soil. The drainage of this is carried off into the lower land to the south by a channel called the Ránibaha, which is extensively used for irrigation in the neighbourhood of Jhelam, its water being banked up in every village as it passes. On the banks of the Jhelam the land is rich, but slopes back from the river bank and receives no benefit from its waters. Further west at Jhelam itself, the river bank rises for a short distance to a stony eminence of conglomerate, but sinks again, beyond the Kahán naddi. From this point there runs a strip of low rich land along its banks continuous throughout the district. Above this strip, the land rises rapidly up to the high villages at the foot of the Tilla Range, where the soil is poor and stony. In the intermediate strip the soil is still fairly good and marked by an abundance of the *dhák* (locally known as *chichra* or *chachri*), which is universally believed in these parts to be a sign of fertility.

Middle Riverain.

Beyond Jalálpur and the Girjhak hills the narrow plain between the Salt Range and the Jhelam contains the most fertile and the wealthiest villages in the district. East of Pind Dádan Khán they are divided into three tracts—villages just below the hills; the intermediate villages, which constitute, *par excellence*, the well tract of the district; and, thirdly, the villages along the river bank, where for the most part the soil is sufficiently moistened by the river floods, and

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Middle Riverain.

requires no irrigation from wells. Of this part of the country Mr. Brandreth writes as follows :—

"The villages under the hills where wells cannot be sunk are nevertheless very rich and fertile. They receive the accumulated water of the hill slopes, the course of which they detain by lofty banks of earth. These detain the water long enough to thoroughly fertilize the field, and then breaking, let the water pass into the next one. Very little water gets beyond these villages except in unusual floods. At first, the water is rather salt, but after the surface soil has been washed, it is pure rain water, with just enough earth and salt to renovate the fields annually. If the rain is not sufficient, it leaves a salt deposit and destroys the harvest. The salt which these villages escape seems to collect in the villages of the middle tract, and year by year one or two wells are reported useless from salt accumulation. There are, however, more than 300 wells in the 15 villages, east of Pind Dádan Khán, and more are being sunk every year, so that it will be some time before the tract deteriorates materially. The soil here has also changed. In the villages under the hills, it is chiefly a reddish hard earth, which to the casual observer does not seem very fertile. In these villages it is a black pulverulent soil of the highest fertility, but becoming mixed with a good deal of sand as it approaches the river. The fertility of the soil, and the absence of ravines and unculturable land render these villages capable of supporting a large surplus population. This, together with the very large area of each village, accounts for the great number of really large and important townships in this tract. The soil near the river is more sandy, and the moisture of the river affords an excuse for not making wells; and consequently the villagers are neither so industrious, nor so prosperous, as those where the continued labour required for the well developes different habits.

Western Riverain.

"Beyond Pind Dádan Khán to the west, the upper and lower class of villages alone remain. The middle class, or 'well' villages, have been, as it were, destroyed by the salt, whose destructive agency has rendered barren a broad extensive tract from Pind Dádan Khán to the end of the district. To the north is the same red soil, rendered fertile by the drainage of the hills and banked up with even more care; to the south is the rich and productive land along the banks of the river; but between is a desolate salt tract which, after even a moderate shower, is so slippery that it is hardly possible to ride over it till it dries."

The Uplands.

The second or Upland region is the tract which lies between the double ranges of the hills. The Uplands of the Salt Range proper lie altogether in the Pind Dádan Khán tahsil. Those which are situated between the Tilla and Nílí hills are all in tahsíl Jhelam. The two areas differ very widely, and it will be convenient to notice them separately.

The Upland of the Salt Range.

The Salt Range Upland lies from two thousand to two thousand five hundred feet above the sea. Mr. Brandreth calls it "one of the most beautiful and fertile bits of soil in Upper India." It is fairly level throughout, and it is so hemmed in on every side by the mountains that it runs no general risk of denudation. The surface is in some places too stony to be productive, but generally the soil is of very good quality. It receives also the benefit of much of the hill drainage which frequently brings with it a fertilizing silt. At the same time the Upland lies so high that there is no room for the development of destructive torrents. This fortunate area is split up into three main basins by the looped structure of the hills, which has been mentioned already. From west to east these are named Vunhár, Kahún, and Jhangar. Each of them is crossed by small subsidiary ridges which divide it still further. All the three are very

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productive, and are somewhat densely peopled. Jhangar is commonly reckoned the most fruitful; but such superiority as it has is probably due to a larger rainfall and a more strenuous cultivation.

The Upland of the Jhelam tahsil.

The Upland of the Jhelam tahsíl between the Nílí and Tilla hills is a very different area. It is made up for the most part of the old Domeli pargana and the Iskandrál *iláka*. It is commonly known as the Khuddar, or country of ravines. This name is certainly well deserved. The surface of the whole tract is broken and distorted in a way which it is hard to realize without seeing it. At first sight it looks like nothing so much as a slice cut from some gigantic sponge. It lies a good deal higher than the Riverain, and a good deal lower than the Salt Range Upland. Its average height is about 1,200 feet above the sea, but perhaps long ago it may have been greater. To the south and west, on both sides of the Bunhá *naddi*, the land is high and sandy, (called here *bhúsli*), and partaking of the character of the hills. Further north and east about Bára Gowa, the soil is more mixed with clay (hence called *chikni*), and lying lower, receives more benefit from the upland drainage. Just under Tilla itself, round Bhet, it is so stony as to be hardly culturable; and the ravines are of great depth. But beyond to the north, on the banks of the Kahán stream, below Rotás, it is low, rich and fertile. Further north, between the Lehri and Langarpur hills, a hard black soil appears (called *gholar*), the richest of any with abundant rains, but the worst in moderate seasons. The drainage of this portion fertilizes the remaining villages lying between it and the river, up to the Ghakar village of Duliál. This tract is familiarly called the *chham*, and is the richest soil of the tahsíl. The black soil mentioned above does not extend up the Langarpur hills. The superficial differences between a country of this kind and the Uplands of the Salt Range are no doubt great and striking. Nevertheless the two areas are radically homologous; but within the Salt Range there has been hardly any denudation, while in the Khuddar—partly on account of its greater width and lower level, and partly on account of the peculiar hydrography of the district—denudation has been incessant and excessive. There can be no doubt that this one reason is quite sufficient to account for all the differences which exist.

Character of the Jhelam Tahsil Upland.

It might naturally be thought that a country like the Khuddar must be very barren; but this is an error. The ravines undoubtedly operate to restrict greatly the area where cultivation is possible. They also make the breaking up of waste a more difficult and expensive operation than usual. Some labour, too, is required to keep formed fields from degenerating; and owing to the peculiar shape, strange situation, and limited area of many of the cultivated plots, farming is sometimes necessarily more wasteful than on the huge homogeneous plains of the Panjáb. But when all these deductions are made it still remains true that the better part of the Khuddar cultivation is very fruitful. The best fields are those which lie low, are well levelled and banked, and which have behind them a large area of waste and intractable ravines. These ravines—useless otherwise—are invaluable as a catchment area for the supply of drainage water

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The Upland of the Jhelam tahsíl.

to the cultivated fields. There are of course many Khuddar areas of which the produce is very poor. High sloping fields are nearly always bad. Most newly-broken waste is at first of this character, but where the conditions are favourable, the ground is gradually and thoroughly levelled. It is exceedingly difficult to form a just opinion concerning an area which is in many respects perfectly unique; but it seems probable that all the best spots in the Khuddar country have been already occupied, and that in future no new lands of the first class are likely to be reduced to cultivation. Some of the old lands may be laboriously improved, and a good deal of new land of very poor quality may be cultivated. But this is all. Some of the most peculiar areas in this country are those which would be called Barrancas in Mexico, but which have here no special name. Often over a considerable tract the whole of the softer soils have been washed away to a great depth. Thus a floor of depression is formed upon which the harder strata remain standing in the form of little hills. These hills are frequently sixty or seventy feet high, but their crests are below the ordinary level of the country. A good example of this peculiar formation is the lately abandoned Government rakh of Kas Khabbi, which is hard by Pothi.

The plateau.

Beyond the northern ridges of the Salt Range, and the chain of the Nílí hills, we pass through a belt of rough and sloping country to the wide plain which fills the whole tahsíls of Chakwál and Talagang, and which may be called the plateau. It is a high-lying area sloping down generally towards the north-west, but in some parts towards the south and east. Near the Sohan *naddi* it is sometimes crossed by short ranges of very low hills. Eastward of tahsíl Chakwál the entire plateau is absorbed into the Ráwalpindi district; and all that remains to tahsíl Jhelam is the long and narrow strip of sloping ground behind the Nílí hills, which is generally, though not very accurately, known as the Pabbi *ilaka*.* In many places this large area is fretted with ravines and gullies.

Physical differences in the plateau.

Throughout it is scored by the deep beds of the mountain torrents which descend from the Salt Range. The more part of these torrents cross the tract in a direction which is nearly at right angles to its length, and receive during their journey the whole drainage of the country. Thus each area between two torrents assumes a slightly arched surface falling away towards the drainage channel on either side. The best and most productive portions are those which lie well on the watershed where there is a large extent of level ground not troubled with ravines. As we draw near to the large torrents, the slope becomes severe, and the surface very broken and stony. It seems probable that the underlying rock is nowhere very far from the surface throughout the entire plateau, and whenever the ground ceases to be fairly level, the overlying soil, if left to itself and not banked up, is almost certain to be carried away from all the higher levels. In

* Pabbi is a general and not a particular name. There are numerous Pabbis both in this district and elsewhere. *Pab* in Panjábi is the upper surface of the foot as it rises from the toe to the ankle. It is applied by an analogy which is sometimes rather remote to the swelling country at the foot of a range of hills.

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Physical differences in the Plateau.

some instances, however, the land near these torrents is better than all the rest. This is the case when the streams leave their deep beds and run in a more open channel. They are then frequently fringed by a broad-riband of level ground dotted with wells and covered with a prosperous cultivation. Unfortunately these areas are neither very extensive nor very numerous; they are more commonly met with on the lower courses of the torrents near their points of junction with the Sohan. Outside of these low and level tracts wells are very scarce both in Chakwál and Talagang tahsíls. Thus scarcity of water is very severely felt in this part of the district; such wells as there are being often mere holes scraped in the light sandy soil at the edge of a ravine, and yielding but little water. Each village, therefore, has several banks, sometimes raised to a great height, in open uncultivated spots, which collect the drainage water in a large pond; on these the cattle depend entirely. They dry up, however, in bad seasons, and then the distress is very great, for in such seasons the wells often dry up also, and the villagers have to go eight or ten miles for water. There is no great difference in fertility throughout the entire plateau. Class for class the soil of the west is as productive as the soil of the east; but the good soils are perhaps more largely represented in Chakwál than in Talagang, and the rainfall is in all probability considerably greater. The Chakwál farming, too, though inferior to that of Jhelam and some parts of Pind Dádan Khán, is much more careful than that of Talagang, which is apt to be slovenly.

Agricultural character of the plateau.

General aspect of the district.

The general aspect of the district is exceedingly rough and broken. Away from the river it is rare to find two miles of level ground together, yet the whole result is hardly picturesque. The scenery suffers from the fatal wants of wood and water. Within and behind the Salt Range one sighs, and sighs in vain, for a little greenery. There are, however, many examples of desolate beauty which is sometimes severe even to grimness. Where there is perennial water there is more life and colour in the landscape. The lake of Kallar Kahár has been often praised—perhaps more than it deserves. There is only one side which is at all tolerable. The upper course of the Jhelam river has much pleasant scenery. Mount Tilla is always impressive. There are some picturesque bits among the spurs of Sakesar in the village of Láwa; but perhaps the finest view in the district is that obtained by riding along the road from Chakwál into and through the valley of Choya Saidan Sháh and so onward to Katás.

Hydrography. River Jhelam.

The drainage of the eastern end of the district is by means of the Kahán and Bunhá *naddis* into the Jhelám; that of the western by the Soj, Gabhír, Ankar, and other streams into the Indus. The watershed is noticed below. The only river belonging to the district is the Jhelam, which forms the east and a great part of the southern boundary, and skirts the district for rather more than 100 miles. In the old time it was called Vedasta, and afterwards Vehat. From the first of these the Greeks took their Hydaspes; the second is still in use among the rustics. The river rises in south-east Káshmír.

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Hydrography. River Jhelam.

Until it has passed the base of the Salt Range spurs, its course is somewhat to the east of south, and its bank on either side is shut in by low hills covered with brushwood; but having cleared the Langarpur hills and reached the open plain, it turns sharply to the southwest and maintains this direction till it joins the Chenáb about 240 miles below the hills. Here its banks are open, though it is not until it has reached a distance of about three miles below the town of Jhelam that the right bank is low enough to admit of inundation. The bed of the river, as long as it remains among the hills, is rocky and the current dangerous, but about eight miles above the town of Jhelam, the bed changes and becomes sandy. This character it retains throughout its course past this district, the river flowing with a swift but generally tranquil current in a bed, the width of which gradually increases in its onward course, though here and there rocks beneath the sand produce shallows or rapids, which are a great hindrance to navigation. The river, however, is navigable by the flat-bottomed boats of the country, from a point about ten miles above the town of Jhelam, the depth of water being about 15 feet in the summer, and nine feet in the winter. The river is studded here and there with low sandy islands (called *belas*) covered with reeds, but apportioned among the villages holding land upon the adjacent banks. The riparian customs are noted below. At the town of Jhelam the maximum recorded surface velocity is 8·66 feet per second, and the approximate maximum discharge in the same time is 200,000 cubic feet. The breadth at the same place varies from 2,000 feet to nearly a mile. The river is liable to sudden freshets. This liability is said to have grown greater since the recent wood-cuttings for the service of the State Railway; but this is very doubtful. The set of the stream against its banks varies greatly. It is said that the changes tend to be periodical; but this is probably a delusion. For some years past, in the general result, Jhelam has suffered far more from diluvion than Gujrát; but there are signs of a change in this respect. Nevertheless the sæcular inclination of the river is probably to shift to the westward, and, in places, this would lead to encroachment on this district. The river water retains its coldness far into the hot season. It is always heavily charged with silt, and the deposit which it leaves is generally of good quality. To suppose, however, that it is always absolutely or nearly uniform is a mistake which has sometimes led to injurious consequences in the assessment of new alluvium.

Other streams.

The remaining streams of the district consist merely of the sandy or rocky torrents which descend from the hills or issue out from the ravines. Such a torrent is called a *kas* or *kasi*. They make a great show on the map, but, except for a few days in the year, they contain little or no running water. After a storm of rain they are often impassable for many hours, but at other times they are merely wastes of sand. In some few places a scanty stream of water flows all through the year. The Ghori Gála pass on the Bunhá is an example, and many torrent beds are dotted at rare intervals with permanent pools which are of great use both for man and beast. These are called *trimkan* or *dhan;* and, even where the bed is dry, water can often be found by digging a hole a few feet deep

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through the sand. What is obtained in this way is sometimes little better than a fœtid puddle, yet in the hot weather, and often in the cold weather too, it is the only drink for whole villages.

Watershed of the Indus and the Jhelam.

Perhaps the most noticeable thing about these torrents is the peculiar disposition of the water-parting between the Jhelam and the Indus. The natural temptation is to think that one slope of the Salt Range would drain to the one river, and the other to the other. This is not so. The line of watershed runs right across the tahsíl and almost through the town of Chakwál, that is to say that the *whole* of the east Salt Range, and all the auxiliary hills in the Jhelam tahsíl, drain towards the Jhelam river. The long slopes of all these hills sink down towards the north, and carry with them by far the greater part of the drainage water which collects in the plain country below. Here it is on the reverse side of the mountains, and has to force its way once more through the entire range before it can reach the river. This is no easy matter. Many *kases* run due east for long distances along the skirt of the hills seeking for some outlet where they may break through. The Sarúli, the Bunhá, the Kutian, and the Karral (which is the chief source of the Kahán), are all instances. At length all these streams *do* break through, and pour the drainage of half the district through the Khuddar country of tahsíl Jhelam. Perhaps this may have been one reason for the great denudation which has happened there. There is a curious native tradition on the subject, which is, perhaps, the memory of a real event. The enormous Kas Bunhá breaks through the northern mountains at the Ghori Gála pass between Diljabba and the hills of the Nílí chain. This outlet, it is said, did not exist always. Núr Sháh, a poor Ghází of Káshmír, had no horse to ride upon, so he mounted the wall of his house, which at once began to travel about with him. At last, so riding, he reached Ghori Gála, where his horse straddled right across the breadth of the pass and there stayed. So the ways were blocked, and all Lundi Patti became covered with water and without inhabitant. At last, in the days of the Choughata kings,* the wall was thrown down, and the water passed through, and the people came back. Inside the pass there is a remarkable ledge of rock not unlike the back of some gigantic horse. No doubt this gave birth to the legend. It is clear that the water must have cut through this ledge at some time and have swept destructively over the face of the country beyond; but the pass is certainly much older than Bábar.

Native tradition.

Chief *kases*. The Kahan.

The two chief *kases* which flow into the Jhelam are the Kahán and the Bunhá. The Kahán drains the centre and east Jhelam tahsíl. It is formed of many branches which issue from the Nílí hills and join one another near Domeli (the junction). The *kases* named after Bakrála, Dina, and Bara Gowáh all flow into it. After a course nearly due east, it pierces the Tilla range under the walls of Rotás, and eventually falls into the Jhelam just below the Sadr Cantonment. In the rainy season it is much vexed with quicksands.

* *i.e.* The Great Mughals.

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The Bunhá.

The Bunhá rises in the Government rakh of Surla, in tahsíl Chakwál, and issues out on the north side of the mountains. Thence it turns east, and near Duman is joined by the Kulián, the Kutián and the Sarúli. The united stream flows through the Ghori Gála pass and across the lower breadth of the Khuddar country, receiving the whole drainage of the eastern portion of the Dhanni country north of the Salt Range. It then sweeps round the southern end of the Tilla hills by a gap between them and the last spurs of the Salt Range. Almost immediately afterwards it burgeons out into a broad waste of sand which is year by year extending its ravages. Its after-course is short, and it falls into the Jhelam between Dárapur and Bhimbar. After a heavy fall of rain it becomes a raging torrent and impassable for many hours. Its bed below the Ghori Gála is upwards of a mile in width.

Minor *kases* flowing to the Jhelam.

The other *kases* which fall into the Jhelam for the most part come down directly from the southern face of the Salt Range or of Tilla. Some of them—such as that which descends on Kálá from the Langarpur hills—often do mischief; but most are unimportant. They flow in broad, shallow beds through a plain country. They rarely contain much water, and many, especially in tahsíl Pind Dadán Khán, disappear before reaching the river. In that part of the district which drains towards the Indus most of the torrents descend from the north slopes of the Salt Range. All of them either fall into one another or into the Sohan which itself falls into the Indus. The Sohan comes into this district from that of Ráwalpindi, and thereafter forms roughly, but not exactly, the boundary between the two. It is very treacherous—one night quite dry, next morning not to be passed without a goat-skin. It is often full of quicksands. Its first feeders in this district are the Karai, the Bhagneh, and the Soj, which all join it near Dulla. A fourth stream comes to the same place through the Ráwalpindi district. Hence the meeting is called Pachnand or Five Waters. An old distich gives the idea of the neighbouring villages as to the natural beauties and advantages of this part of the country—

Kases flowing to the Indus.

The Sohan.

Pachnand.

"Kur, Karai, Bhagneh, Nilawáli, Dand—
Adha rup wiláyeti, adha rup Pachnand."

Other *kases*.

West of Pachnand are many other *kases*. Of the principal Mr. Arthur Brandreth has given the following description: "The western part of Dhandi (*i.e.,* West Chakwál) is all drained by the Khunála, a small ravine near Kot Rupwál, and by a great *nallah* called the Dhráb, which is, however, only an affluent of the still greater Gabhír, the chief *nallah* in this part of the district. The Dhráb rises at Kallar Kahár, and at first flowing north, bends round in a quadrant of a circle to meet the Gabhír near the village of Dhráb. Its bed here is a vast plain of dry sand some two miles wide, with rich land all along it; but in some parts its bed is extremely deep and narrow. The Talagang tahsíl is mainly drained by two large streams, both called the Gabhír. The east Gabhír nearly forms the boundary of the tahsíl and Dhanni. The west Gabhír is its west boundary. Both rise near Jába in the Salt Range. One curves to the east and then to the north; the other to the west and north-west. Both fall into

The Dhráb.

The two Gabhírs.

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the Sohán *naddi*. The other streams which intersect this tahsíl are the Draggar by Talagang and Koh Sarang; the Ankar by Thoha and Taman; and the Letí. This latter forms the boundary of the Miál and Pakhar *ilákas* and was till lately the western boundary of the tahsíl. Of the three, the Letí is the deepest, and has little culturable land on its banks, which are high and rocky. The Ankar at first is also between high banks, but latterly widens, and has several prosperous villages on its banks. The banks of the Draggar are generally steep, but here and there expand and afford room for several flourishing little wells near it."

The Draggar. The Anker. The Letí.

Irrigation from Hill Streams.

The torrents mentioned above are not utilized for purposes of irrigation; but the district also contains several perennial hill streams, issuing from springs in the Salt Range, the water of which, when sweet, is used for irrigation. The valley of Choya Saidan Sháh is watered by one of these, and the villages of Kallar Kahár and Báganwálá by another; but the whole area thus irrigated is only about 750 acres. Nevertheless, the right to make use of the water is often hotly contested by neighbouring villages. The cultivators of one village will make a drain and carry off more water than they have a right to, while the crops of another village depend upon having the channel open at once while the rain lasts. As there is no time for an appeal to the Courts of law, the villagers proceed in a body and cut the new bank, and a fight ensues, in which not unfrequently lives are lost. Mr. Brandreth records that in one small village 200 acres of land were thrown out of cultivation by a wrong decision upon this subject. "It is an undoubted law of the "country," he proceeds, "that each village has a right to the surface "drainage of its own lands, even though a bend of it runs through a "part of a neighbouring village."

Lake of Kallar Kahár.

The only lake in the district is that of Kallar Kahár. It lies close under the northern slope of the Salt Range, and is itself very salt. It is roughly circular, nearly a mile across when full, and perhaps about four feet deep. The reason of its saltness is not properly known. Mr. Wynne, of the Geological Survey, thinks that it may be partly due to ordinary precipitation, and partly to brine springs. The villagers have a legend that the water was once fresh. One day, as the women were filling their pitchers, Bábá Faríd, the holy saint of Pákpattan, came that way and asked for a little water to drink; but the women answered: "How would you drink when the water is salt?" For they knew him not. "Even so," said the saint, "the water *is* salt." So he passed by; but in the evening the men came home to eat, and behold the water in the pitchers was salt, and the lake has been salt from that day.

Water-supply of the district.

Speaking generally the district cannot be said to be well supplied with water. In the villages near the river wells are usually met with, especially in the Jálap *iláka* of tahsíl Pind Dádan Khán; but throughout the riverain tract there are several villages which have none. In and behind the hills wells are decidedly uncommon. The only spots upon which they are much built are the stretches of level ground which sometimes fringe the course of a *kas*. Elsewhere, unless there is a natural spring, the only resource

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Water-supply of the district.

is a tank or a water hole. Both frequently fail, and then long journeys have to be made in search of water. Cattle often leave their own villages for the same reason. Many of the natural springs are situated in the Government rakhs. When—as sometimes happens—such rakhs are closed against grazing, great discontent always arises, partly at the deprivation of pasture, but chiefly at the deprivation of water.

Rainfall, Temperature, and Climate.

Table No. III shows in tenths of an inch the total rainfall registered at each of the rain-gauge stations in the district for each year, from 1866-67 to 1882-83. The fall at head-quarters for the four preceding years is shown in the margin. The distribution of the rainfall throughout the year is shown in Tables Nos. IIIA and IIIB, while Table No. IV gives details of temperature for each of the last 14 years, as registered at head-quarters. The climate of the district is not uniform throughout. The cold of the winter season is sometimes severe, and is sensibly greater in and beyond the hills than in the plains below them. Light sleety snow occasionally lies for a day on Sakesar. The heat in the summer is very great, specially in valleys and gorges between the hills, where it is sometimes almost suffocating, On the other hand there is often a cool breeze on the hill tops by night, to make amends for the hot haze that shimmers over them all day. The rainfall is moderate, but with a strong inclination to diminish as it goes westward. In examining the rainfall table it is well to remember that the rainfall at the head-quarter station is not always a trustworthy guide as to the fall in the tahsíl generally. Rain—especially scanty rain—is sometimes very local. Pind Dádan Khán and the Thal are often dry like Gideon's fleece, while the hill *ilákas* are rejoicing in a downpour; and rain that falls in the east of Jhelam tahsíl does not always extend to the west. There are many similar instances; but the whole matter is extremely uncertain. It is impossible to lay down any rule that will remain true for two years together:—

Year.	Tenths of an inch.
1862-63 ..	253
1863-64 ...	276
1864-65 ...	478
1865-66 ...	365

The following are the average rainfalls given by the figures :—

Tahsil.	Average rainfall in inches		
	Rabi, 7 months, Sept. to March.	*Kharif*, 5 months, April to August.	Whole year.
Jhelam	9·5	17·5	272
Pind Dádan Khán ...	6·8	10·0	168
Chakwál	5·9	8·5	144
Talagang	5·4	97	151

What is of as much importance as the amount of the rainfall is its distribution in time. A small rainfall well distributed is infinitely superior to a heavy fall crowded into a few abnormal storms, with

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Disease.

long intervals of aridity both before and afterwards. On this subject no available tables can give any trustworthy information.

The Medical Officer of the district, Dr. Simmonds, has furnished the following notes :—

"The district is fairly healthy. Stone in the bladder occurs chiefly in the hilly parts and affects the young and old. Goitre occurs mostly in the valleys, and especially in those of the Salt Range. Guinea worm occurs to a considerable extent in and around Talagang. Skin diseases, chiefly psoriasis, also gives many admissions round Talagang and Chakwál. Malarial fever occurs chiefly along the course of the river, and specially at those parts of it which overflow or change course, thus leaving ground to dry."

The worst time of year is the season of the autumn harvest.

Tables Nos. XI, XIA, XIB, and XLIV give annual and monthly statistics of births and deaths for the district and for its towns during the last five years, while the birth and death-rates since 1868, so far as available, will be found in section A of Chapter III for the general population, and in Chapter VI under the heads of the several large towns of the district. Table No. XII shows the number of insane, blind, deaf-mutes, and lepers as ascertained at the Census of 1881 ; while Table No. XXXVIII shows the working of the dispensaries since 1877.

SECTION B.—GEOLOGY, FAUNA AND FLORA.

Geology.

Our knowledge of Indian geology is as yet so general in its nature, and so little has been done in the Panjáb in the way of detailed geological investigation, that it is impossible to discuss the local geology of separate districts. But a sketch of the geology of the Province as a whole has been most kindly furnished by Mr. Medlicott, Superintendent of the Geological Survey of India, and is published *in extenso* in the Provincial Volume of the Gazetteer series, and also as a separate pamphlet. The geology of the district may be said to be the geology of the Salt Range. This was first examined by Drs. Fleming and Verchere. A memoir by Dr. Jameson is printed in the "Journal of the Bengal Asiatic Society" for 1843; while a short paper on Mount Tilla by Mr. Wynne in the records of the Geological Survey of India and sundry papers by Dr. Warth in the Imperial Customs Reports for 1869-70 and 1870-71, may be referred to. But the above have been practically superseded by a more detailed examination of the Salt Range made by Mr. Wynne, and the description given by Mr. Medlicott is based upon that examination. More detailed reports on the subject will be found in the memoirs of the Geological Survey of India, Vols. X, XI, XIV and XVII.

The results may be briefly summarised thus: The elevation of the Salt Range is generally referred to the tertiary period. There are various opinions as to the causes which produced it. Mr. Wynne writes: "So far as I can judge, the structure of the range leads to

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Geology.

"the inference that its existence is due to complicated lateral com-"pression under unequal conditions of resistance, which, in a late "tertiary period, developed itself in local disturbance along one or more "lines of fissure coinciding with the direction of the uniclinal escarp-"ments, the whole of the features having been subsequently much "modified by meteoric erosion." It is doubtful whether the range is an independent axis of elevation, or merely a part of the sub-Himálayas. The stratification is generally conformable, and appears to indicate a tranquil deposition, under conditions which remained practically identical throughout. Nearly every geological age is more or less represented. The sandstones, which form a great portion of the range, are of several epochs; but the limestones, which are also numerous, are either carboniferous or eocene. Mr. Wynne has discovered fossils of lower silurian age in beds which overlie the salt marl. So the salt itself must have been deposited before the earliest known fossiliferous rocks, with the doubtful exception of the Laurentian series. There are few or no traces anywhere of volcanic or igneous action. Fossils are not numerous. In the lower series they occur only in the silurian and carboniferous beds. In the Mesozoic Age, among others, there are *Ceratites* in the Trias, *Ammonites* in the Jurassic, and *Terebratulæ* in the Chalk. In the Kainozoic beds the eocene are full of nummulitic relics, and the miocene have mammalian bones and numerous crocodilian remains.

Mines and minerals.

The mineral wealth of the Salt Range is considerable. Not only are building stones and marbles of great beauty produced in abundance, but there is a large variety of stones that supply lime. There is also gypsum for plaster of Paris, and various red earths and ochres occur which have value as colouring agents. Coal, sulphur, and petroleum are found, and many metals, including copper, gold, lead, and iron. This last occurs in the form of rich hematite, and is in some places so abundant that the rocks containing it disturb the indications of the magnetic compass. Finally, the range furnishes the greater portion of the salt-supply of the Punjab. With the exception of salt, indeed, little has yet been done to develope its mineral resources, the exceeding cost of carriage having been the great obstacle; but now that railway communication between Miáni and Lahore has lessened this difficulty, it is to be hoped that a region so fertile in mineral products will not be allowed to lie fallow. The administration report for 1878-79 (the latest return) shows salt mines at Khewra, Sardi, Makvách, Katha, and Játána, of which the first two alone were worked during the year, and yielded 3,241,508 maunds; and coal mines, not worked during the year, at Pidh, Dandot and Kundal.

Salt and salt mining.

The most important mineral production of the district is salt. It is found in great quantities in most of the gorges on the south side of the Salt Range as far eastward as Játána. Beyond that its occurrence is doubtful. The geologists expected to meet with it even in Tilla; but a trial boring there was not successful. The salt was originally believed to belong to the Devonian or Old Red Sandstone series. But it has been now shown to be of Silurian age or even older. Hitherto both it and the rocks which immediately over-

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Salt and salt-mining.

lie it have alike proved barren of fossils. No one has ever pretended to give a coherent account of the manner of its deposition. All the theories upon the subject are merely confessions of ignorance. It occurs in broad bands or layers, separated from each other by interposed layers of red marl and impure gypsum. The red marl, which is a kind of pink scarlet in colour, is characteristic of the occurrence of salt. The salt differs slightly in quality; but by far the greater part of it is more than usually pure. The analyses conducted at Agra show an average result of 93 per cent. of pure salt, 4½ per cent. of water, and only 2½ per cent. of foreign matter. Of the latter the chief constituent is chloride of magnesium, which gives to the salt when in lumps a rusty red colouring. The rest is made up of sulphate of lime and chloride of calcium.

In Sikh times the salt was worked at each available spot, but after the annexation it was found advisable, in order to facilitate the collection of the revenue, to limit the number of mines. At present salt is only worked at three spots to the east of the Indus, at Kheura, Sardi and Várcha. The two former places are within this district, the last is in that of Shahpur. The best known mines are those of Kheura, situated a few miles above and to the north-west of Pind Dádan Khán, and bearing, since 1870, the name of the "Mayo Mines." We have no accurate information as to the period at which salt was first dug from these mountains. Dr. Fleming records an assertion of the natives that the mines were first worked in the reign of Akbar, and mention is made of them in the Ain Akbari. But this is all the information existing upon the subject. The native tradition is that Akbar was informed of the existence of the salt by a certain Asp Khán, on condition of his receiving as reward, during his lifetime, a sum equal to the whole of the wages of the miners employed in digging it. Salt was sold in Lahore during the reign of Akbar at the rate of six annas per maund. Under British rule the working of the salt was at once taken up as a source of State revenue. The salt was at first sold at the depôt at the rate of Rs. 2 per maund, the Government bearing the cost of quarrying, which at Kheura amounted to Rs. 3-12 per 100 maunds. The income from the mines of the Salt Range, including the Trans-Indus works, amounted in 1850 to Rs. 15,37,760. The demand rapidly increased, and in 1860-61 the income amounted to Rs. 27,43,906. In the following year the price was raised from Rs. 2 to Rs. 3 per maund, and the income of the year 1862-63 rose to Rs 30,31,568. The working of the mines at this time is well described by Dr. Fleming in his report upon the Salt Range—(Selections from correspondence, Punjab Government No. XXII. p. 271, ff.)

"When a spot has been fixed on as a promising locality, a tunnel is cut in the marl about 5 feet high and 3½ broad, and carried on till salt is reached, the proximity of which is generally indicated by the marl becoming moist and assuming more the character of a dark red clay. The mineral is then excavated as long as a supply is procurable, no attention being paid to leaving pillars at intervals, for the support of the workings, the consequence of which is that great annoyance is experienced from the falling in of the roof of the mines; and accidents to the unfortunate miners themselves are of frequent occurrence. Should the shaft have been sunk on, and reached only a mass of salt, after this

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is worked out, the mine is either abandoned or a gallery driven to a greater depth into the marl, until another large mass is found or the real salt-bed reached. As this invariably has a strike and dip corresponding to the strata superior to the marl, the stratification of the rock guides the miners in their onward course. These mines are nothing more than huge caves entirely excavated in the salt, which is seldom or never worked through, either in the floor or roof, because as the salt approaches its matrix it becomes intimately mixed with marl, and is highly deliquescent from containing magnesia. In almost every mine in the Salt Range, the evil of having left no pillars to support the roof is experienced, and some of the largest and best mines have been in a great degree abandoned in consequence of their becoming filled up with huge masses of salt, gypsum, and marl, that have fallen in from above.*

"As the marl is the lowest rock of the range and dips under all the others in a northerly direction at an angle of from 25° to 40°, as might be expected, much trouble is occasioned by the filling of the mines with water when they reach to any great depth. During the rains too, in July, August and September, the water rushes through passages in the marl into the mines, and by detaching large portions renders them quite unsafe. In these months the miners desert their work, partly on account of its dangers, and partly on account of the intense heat, and the numerous fleas and mosquitoes which infest their neighbourhood. In consequence of the irregular way of carrying on the workings, the passages into the various mines exhibit at present a succession of ascents and descents, which sometimes become so polished and slippery as to render walking over them a matter of some difficulty.

"In extracting the salt, the chief instrument used is a hammer, pick-shaped and hard-tempered at one end, and with round head at the other. A mass of salt being fixed upon as the scene of operation a portion is lined off, about two feet thick, and along this a groove is cut with the sharp-pointed hammer to the depth of some eight or ten inches. Larger sharp-pointed hammers as wedges are then introduced at intervals along this line, and on their broad heads a series of sharp blows are inflicted. This generally detaches a block of salt, which is then broken up into lumps of a convenient size for being carried out of the mines. The amount of waste resulting from such a method of working is immense, and as powdered salt is not saleable as long as lumps can be had, it is generally shovelled into the bottom of the workings, where there frequently is a brine-pool ready to receive it. On account of the dangerous state of the roof of nearly all the mines, gunpowder is seldom used, and all the work is done by the pick and hammer. From the want of circulation of air in most of the mines and the dampness of the atmosphere, the heat is most oppressive; and from the filthy habits of the miners, the stench in some of the mines is quite overpowering. In the month of December, when the temperature of the external air was 71°, in the Baggi mine at Kheura, the thermometer indicated a temperature of 81°. Men, women and children, indiscriminately pursue the avocation of salt-miners. Families generally work together, the mother and children being chiefly occupied in carrying on their backs to the mouth of the mine, the masses of salt which the father has quarried. They are a somewhat discontented set, and strikes are by no means uncommon.

"The pay of the miners varies a good deal. At Kheura, Mukrach and Varcha, salt is turned out at the mouth of the mines at the rate of Rs. 3-12 per 100 maunds = £0-7-6 for 8,000lbs. At Sardi they receive Rs. 2-14=5*s*., while at Kálabágh, where the salt occurs in enormous masses at the surface and

* "It must be remembered that most of the mines being already excavated when they came under British authority, their present state is an evil for which there is no help. The unsupported excavations, as remarked by Dr. Oldham, are not the result of our system, but have been so since the Sikh times when they were worked. Dr. Oldham goes on to say that "the shafts and galleries that we sink *now*, are sunk as well as they are in any mines in the world," and the systematic working of the Mayo Mines has been greatly improved, even since Dr. Oldham wrote.

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only requires to be broken up and removed, they receive Rs. 2-14 for quarrying it, and Re. 1-5 per 100 maunds for conveying it to the depôt at Mári: oil and tools are supplied by the miners themselves. The quantity of salt that can be turned out in a day by a good workman is about ten maunds, or 800lbs. which at the present rate of Rs. 2-8 for 100 maunds would give the miners 4 as. or 6 as. a day. Where, however, a family work together, the earnings amount to something considerable.

"The general appearance of the miners varies greatly. At the end of the hot season they appear very sickly and sallow, but towards the close of the cold season, they do not appear to us to have a more unhealthy aspect than the inhabitants of towns in the Panjáb generally have. They, however, suffer a good deal from sickness, but this is probably owing more to the position of their villages and their filthy habits than to their trade. Certain diseases, such as opthalmia and pulmonary complaints, are very prevalent among them, and doubtless result from the injurious effect of the finely powdered salt acting as an irritant on the mucous membranes. Fever is very prevalent among the miners at Kheura, where (perhaps from the confined position of their mine) they look more sickly than at most of the other mines. Goitre is a frequent complaint, but particularly so at Kálabágh (in Bánnu) where every one seems more or less affected. This the natives ascribe to the Indus water, which is generally of a milky color from the fine calcareous mud mechanically suspended in it, which the addition of a little alum speedily removes."

The enormous improvement in the manner of working the mines and in the condition of the miners that has taken place since Dr. Heming wrote may be gathered from the description of the present system given below. The same writer in a notice of the Salt Range, printed in the Journal Asiatic Society for 1848, thus describes the villages and mines of Kheura:—

"From the foot of the hills, a narrow path strewed with boulders and masses of rock which have fallen from the height above, leads through a deep ravine to the salt mine village, which is in terraces on its east side, and is inhabited by the miners and their families during the dry season. In the rains, on account of the heat and mosquitoes, they desert Kheura and take refuge in the small village of Tob, which is built on the opposite side of the ravine, but at a considerable height above the salt mines, where they enjoy a cool breeze and an immunity from their winged tormentors. The inhabitants of these villages amount to about 650, of whom 400 are employed in the salt mines.

"Round the village no fewer than ten shafts are sunk into the red marl for the purpose of extracting the salt. The mine is a little to the east of the village, and on a higher level, the path leading to it, passing over red marl containing angular masses of gypsum. The entrance to the mine is by an opening cut in the marl about 7 feet high and leading into a passage which preserves throughout a height of 6 feet, and a width sufficient to allow two individuals to pass. From the entrance to the end of the workings the distance is 640 feet, where a chamber has been excavated entirely out of the rock salt, 40 feet long by 30 feet broad, and about the same height, in which at the same time we visited it, men, women and children, were busily engaged quarrying the mineral, by light of small oil lamps formed of the salt and hung by iron hooks on its walls, the crystalline surface of which reflected the light on a deep pool of brine situated in one corner of the chamber, and which is said to communicate with several of the neighbouring shafts. The appearance of the miners, as seen in the dim light which illuminated the mine, was highly striking, their faces and bodies being covered with a saline incrustation. Their dress is of the lightest description, the men wearing nothing but a bit of cloth round their loins, and a pad of *namdah*, or thick woollen cloth, tied ever their shins to protect them from injuries from the sharp angles of the rock or the blows of their instruments."

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The mode of excavation continued for many years to be very faulty, and the waste of salt was enormous, amounting to a tenth of the whole produce; and it is only of late years that efforts have been made to introduce a scientific mode of working the mines. In 1869-70 they were made over to the care of the Imperial Customs Department, having hitherto been immediately under the control of the Panjab Government, and in the following year an experienced engineer was placed in special charge of the Kheura or Mayo Mines. About the same time another important change was introduced. The Government had hitherto borne the cost of excavation, defraying it out of the income derived from sales. Under the new system, which was introduced on July 1st, 1870, a full duty of Rs. 3 per maund was levied on all salt sold, and the cost of production was thrown upon the purchaser. An annual saving of about Rs. 60,000 was thus effected.

Several interesting reports have been written upon the Mayo Mines by Dr. Warth, the engineer in charge. In one of them, he gives the following description of the geological formation of the mountain in which they are excavated* :—

	Strata.	Thickness.	Average.
Recent formation ...	Débris of gypsum ...	100'—200'	150'
Limestone formation	Nummulitic limestone ...	... ...	200'
Coal formation ...	Coal, alum, shale and marl ...	.. ...	20'
Sandstone formation	Green sandstone ...	.. ...	600'
	Blue marls ...	100—150'	125'
	Red sandstone ...	400'—800'	600'
Salt formation ...	Upper layer of white gypsum	... ...	5'
	Brick red marl or gypsum ...	60'—200'	130'
	Brown gypsum ...	80'—200'	140'
	Lower layer of white gypsum	... ...	200'
	Salt marl and salt ...	... ...	600'
Volcanic ...	Trap piercing through the lower strata up to the boundary between the upper layer of white gypsum and red sand-stone.		

Total thickness of the sandstone formation	1,325	feet
Ditto ditto salt	1,075	„
Total sandstone and salt formations ...	2,400	„

After thus describing the strata, Dr. Warth continues as follows:—

"The most characteristic strata of this formation are the green sandstone and the brick-red gypsum. The former constitutes the crown of all the heights. The brick-red gypsum crops out on the base of the hills, and in the gorges, and is the indicator of the salt formation all over the Salt Range. There are enormous quantities of brick-red gypsum at Kheura, not only low down in the gorges, but high up towards the summit of the hills, indicating the enormous riches of salt within them. The salt formation begins with the brick-red gypsum, if we omit the small layer of white gypsum which mostly, but not invariably, occurs between the brick-red gypsum and the red sandstone. The brick-red gypsum crops out on the south side, on the slope of the hills towards the plains, and again far up in the Kheura gorge below the sandstone formation. It surrounds the great raised centre of the salt formation, and for the most part covers it. The red gypsum is a most peculiar brick-red coloured mixture of clay and crystallized gypsum. One might as well call it brick-red

* Appendix H to Imperial Customs Report 1869-70.

marl, but I prefer the former expression because the gypsum is the principal constituent of the mixture. Below the brick-red gypsum, the brown gypsum appears. This mixture is similar in composition to brick-red gypsum; there is only a difference in the colour, that is, it is brown instead of brick-coloured."

The mines now worked are called the Baggí and Sujiwál mines. The next largest excavations are the Pharwála and Makhad mines, neither of which are now worked, but they are open and have been surveyed. The otherold mines are those of Chingwála, Biliwála, Fakira-ki-traddi, Matwala, Láwála, Saho, &c. The size and resources of the four surveyed mines of Baggí, Sujiwál, Pharwála and Makhad are thus given by Dr. Warth in the report already quoted (paras. 35—38) :—

"There are five workable salt seams, with an aggregate thickness of 275 feet. Between these lie salt marl strata, and thin, unworkable salt seams, in all at least 275 feet thick, making a total thickness of 550 feet. To these we may add 50 feet of marl over the upper Baggí salt seam, and thus estimate the whole thickness of the known strata to be equal to 600 feet. The size of the mines will best be conceived from the quantity of salt which has been excavated. Each cubic foot of excavation we take to equal $1\frac{1}{3}$ maunds of salt. It is not less than this, because the wasted small salt which lies on the floor of the mines is already deducted and is not added to the excavated space. The following are the dimensions and contents of the four surveyed mines :—

	Baggí.	Sujiwál.	Pharwála.	Makhad.
Length parallel to the strata in feet ..	350	800	800	400
Width in the slope in feet ...	125	350	125	150
Thickness of the excavated stratum in feet ...	192	30	30	30
Cubical contents ...	84,00,000	84,00,000	30,00,000	12,00,000
One-fourth deducted for pillars ...	21,00,000	21,00,000	...	...
Remaining cubical contents ...	63,00,000	63,00,000	30,00,000	12,00,000
Maunds of salt ($1\frac{1}{3}$ per 1 cubic foot) ...	84,00,000	84,00,000	40,00,000	16,00,000

Total of maunds in the four mines ... 22,400,000, equal to 16,800,000 cubic feet of excavated space.

"Under British rule, from 1850 up to 1870, there has been a quantity, amounting to one hundred and fifty-four lakhs of maunds taken out. This, however, has not been procured from these four mines only; a large quantity has also been extracted from Chingwála and other inferior mines. There is a large quantity of small salt lying waste in the mines, because the traders cannot use it. From Sujiwál alone, at the very least, fifteen lakhs of fine salt could be extracted, with no further expense than that of removal. Taking into account all the other small mines, we may estimate the whole amount of salt taken out of Mayo Salt Mines hill up to the present time at 30 millions of maunds."

The Commissioner of Inland Customs writes in his report of "1869-70 (para. 45): "These mines have a great future before them. "Even now, I could, if a demand existed, turn out during the current "year 100,000 tons at a total cost not exceeding 2*s*. 6*d*. a ton. "And in three years' time, were such a development called for, the "amount could be raised to a quarter of a million of tons."

The completion of the wire rope tramway from the interior of the mines to the river bank, and across it to the great salt depôt at Miáni in Sháhpur, and the opening of the North State Railway with its branch to Miáni have enormously developed the demand for the salt of the Jhelam mines, placing it in competition, in every part of Northern India, with the inferior salts, which were formerly able, on account of the expense of carriage, to under-sell it.

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Great improvements have been lately effected in the drainage and ventilation of the mines and in the mode of quarrying the rock. A shaft has also been dug connecting the Baggí and Sujiwál mines. This shaft is 466 feet in length and, with the exception of about 60 feet of marl, passes through pure salt, and establishes the fact that the lower Baggí salt seam is identical with that of Sujiwál. The method of working in the Baggí and Sujiwál mines is thus described by Dr. Warth:—

"The miners work in three different ways in Baggí. First they work forward from a certain floor into the rock salt. This is called the *katti*, and is the most troublesome. It is nearly as hard as driving drifts, and the miners have at first a good deal of pick work before they can blast. As they go forward with the *katti* they gradually work the roof down, which is called *chath*. For this purpose they sit upon tripods, some of which are 25 feet high. When they have advanced with the *katti* and *chath*, they begin to work the *par* from behind downwards. This *par* ought to be very easy work, but it is not, because, from want of space, it cannot be carried on in regular and advancing steps. Instead of that the miners work the *par*, down all at once over certain areas, which are marked out to them. This is the case in the workings of the lower seam in Baggí, and the deep workings of Sujiwál are another example. About 80 men are there working down the bottom of a chamber which is 300 feet long and 40 feet wide. These deep workings are the only *par* work in the Sujiwál mine. In all other working parts of this mine, the *katti* is driven forwards on the floor of the salt seam, and the roof is worked upwards as *chath*. This is the very contrary of what I propose in the new working plan. I want to work the *katti* on the roof of the salt seam, and the remaining salt will all be worked down to the bottom of the salt seam as *par*. This same method I wish to employ in this mine, by working a *katti* on the top of each chamber and getting the remaining salt out from below by steps."

The number of miners employed in the Sujiwál and Baggí mines averages about 390. Work ceases in the rainy season, and also when the stock of salt becomes too large. The average working season is about eight months in the year. But there are only four working days in the week, the miners keeping holiday upon Sundays, Tuesdays and Fridays. This leaves only 138 working days in the year. The miners are paid at the rate of Rs. 4 per 100 maunds. This is not, however, net gain to them; for, out of it, certain charges, such as carriage of the salt to the mouth of the mine, lighting, &c., have to be defrayed. The average number of carriers is 449 adults and 337 children. Their earnings are as follows:—

	Annas
An adult, 15 maunds of salt daily, at Re. 1 per hundred maunds	2·40
A child 5 ditto ditto	0·80

From this about half an anna must be deducted from the earnings of the adults for oil, which leaves the daily earnings of an adult carrier at 1·90 annas, and of a child 0·80 annas. The number of journeys to and fro, which the carriers make daily, is 20 to the more distant points in both mines, 25, or even 30, to the nearer points. The adults as a rule bring out 60lbs. of salt at each turn; but sometimes they will carry pieces, weighing over 80lbs. The total cost of carriage to the miner is about Re. 1 per 100 maunds, leaving a net sum of Rs. 3 per 100 maunds for his own remuneration, which, as he can, on an average, quarry 20 maunds of salt in a day, represents Rs. 0-9-7 per day. Other charges—

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weighing, powder for blasting, oil and tools, reduce this sum to rather more than 7½ annas, which may be taken as the average earning of a working day. The cost of production of 100 maunds of salt, Rs. 4, is thus distributed by Dr. Warth :—

	Rs.	As.
Net wages of the miners	2	7·14
Pay to the Dharwái (weighman)	0	1·83
Miner's powder 1 ser	0	3·20
Miner's oil ⅝ ser	0	3·33
Miner's tools	0	0·50
Net wages of the carriers	0	13·00
Carrier's oil	0	3·00

The Sardi mines are somewhat further to the west, lying ten miles to the north-west of Pind Dádan Khán. They were more recently opened than those round Kheura, and were originally constructed upon a better plan, good flights of steps being cut out of the salt, and the roofs of the passages well supported by strong beams of wood. The old mine of Mukrách, now closed, is situated below Choya Saidan Sháh.

The sub-joined table* shows the gross income derived from the Salt Range mines, from 1850-51 to 1871-72, together with the expenditure incurred and the net revenue :—

Years.	Mayo Mines.	Other Mines.	Miscellaneous Revenue.	Gross income.	Expenditure.	Net Revenue.
1849-50 ...	4,21,477	2,77,418	1,07,907	8,06,802	Not traceable.	
1850-51 ...	9,26,886	6,10,520	354	15,37,760	1,21,352	14,16,408
1851-52 ...	7,68,494	5,12,802	5,460	12,86,756	1,55,597	11,31,159
1852-53 ...	11,84,299	4,99,917	1,530	16,85,746	1,32,283	15,53,463
1853-54 ...	12,87,507	6,63,028	1,415	1,95,950	1,48,278	18,02,652
1854-55 ...	15,06,020	5,88,037	1,217	20,95.274	1,67,020	18,38,254
1855-56 ...	14.25,980	5,05,740	1,803	19,33,523	1,56,738	17,76,785
1856-57 ...	13,66,603	5,27,928	3,820	18,98,351	1,70,175	17,28,156
1857-58 ...	13,05,286	6,16,096	,0555	19,26,437	1,63,747	17,62,690
1858-59 ...	14,13,716	6,28,486	6,894	20,49,096	2,10,863	18,38,233
1859-60 ...	15,41,070	6,21,767	7.614	21,70.451	1,81,895	19,88,556
1860-61 ...	20,25,835	7,08,903	9,168	27,43,906	1,80,977	25.62,929
1861-62 ...	18,15,200	7,33,287	5.682	25 54,169	1,68,662	23,85,507
1862-63 ...	22,03,599	8,12,972	14,997	30,31,568	2,23,051	28,08,517
1863-64 ...	27,01,902	6,80,416	4,372	33,86,690	2,31,494	31 55,196
1864-65 ...	26,29,986	7,44,752	2,983	33,77 721	2,06,774	31,70,947
1865-66 ...	26,68,843	6.67,815	455	33,37,113	2,12,321	31,24,792
1866-67 ...	28,92,380	6,32,995	449	65,25,824	2,01,592	33,24,232
1867-68 ...	28,97,530	6,91,791	576	35.89,897	2,20.836	33,69,061
1868-69 ...	29,10,338	8,76,243	2,354	37,82,935	2,33.723	34,49,212
1869-70 ...	35,03,171	9.88,287	1,081	44,92,539	2,26,278	42,66,261
1870-71 ...	27,99,092	8,65,310	23,995	36,88,397	2,09,001	34,79,396
1871-72 ...	29.65,897	8.36,708	80.214	38,82,819	2,60.889	36,21,930
1872-73 ...	34,00,450	6,99,030	86,288	41.85,768	2,67,191	39,18,577
1873-74 ..	34.70,163	6,41,364	87,567	41,99,094	2,86,765	39,12,329
1874-75 ...	34,15,808	5,57,282	98,166	40,71,256	2,40,168	38,31,088
1875-76 ...	32,26,895	3,88,949	75,861	36,91,705	2,35,220	34,56,485
1876-77 ...	33,89,933	4,49,644	99,695	39,39,272	2,15,558	37.23,714
1877-78 ...	36,75,672	4,93,574	1,12,167	42,81,413	2,81,834	39,99,579
1878-79 ...	32,31,738	4,86,687	91.857	38,10,282	3,03,242	35,07,040
1879-80 ...	33,07,128	4,50,075	95,834	38,53,037	2,78,397	35,74,640
1880-81 ...	31.28,834	5,07,445	92,937	37,29,216	2.64,999	34,64,217
1881-82 ...	31,08,897	4,83,630	1,12,795	37,05,322	3.22,574	33,82,748
1882-83 ...	26.22,221	5,22,152	1,85,961	33,30 334	3,96,326	29,34,008

* The heading "other mines" includes the Mukrách mines, closed since 1864-65; the Sardi mines, which, on an average of ten years past, have produced a revenue of a little over two lakhs of rupees, the Wárcha mines in Shahpur, and the Kálabágh mines in Bánnu. The whole have been grouped together for the sake of completeness. It must also be remembered that the income even of the Mayo Mines is not shown in the Government returns as revenue of the Jhelam district, but of that of Shahpur, the mines being in the Shahpur Customs district.

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Mayo salt mines.

The mine as at present worked has a drift running at a low level north 47 degrees east from entrance, with a tramway line laid down to a distance of 1,700 feet. This is prolonged by a steep gradient, which is an incline of one in eight and a half, to a further length of 544 feet. This drift and its gradient pass through portions of the Pharwála, Sujiwál and Baggi seams or mines. From the head of the gradient is another drift, known as the 1,000 foot drift, which runs south 30° west and is 1,491 feet long. Along the 1,000 foot drift a tramway is laid in connection with the lower tramway, and along these lines the whole of the salt removed from the mines is carried. There are loading stations along both the upper and lower lines, and it is the duty of the women and children employed in the mine to bring the salt to these stations from the different chambers. The 1000 foot drift runs parallel with the Baggi seam. From the 1,000 foot drift a drift known as the upper 1,000 foot drift has been run to a length of 641 feet, to allow of the salt being reached at a higher level. There are numerous smaller drifts for connecting workings or for allowing for ventilation.

The chambers are constructed across the strata. They lie south 30° east, and north 30° west. They are forty-five feet broad and extend or will extend from the marl seam to marl seam enclosing the whole of the salt of the intermediate marl seams or flaws. The thickest, such as the 70 feet marl seam between Sujiwál and Baggi, are pierced by drifts, the others are cut through. They are divided by walls of salt twenty-five feet thick which are left standing to support the roof. The present system of working the chambers is from roof downwards. For this purpose the work is commenced as high as possible. A forward working is first commenced. This is seven feet high, forty-five feet broad and is carried on till marl is reached. This is the most difficult portion of the mining work. After the forward working has been completed the roof is blasted down, sufficient salt being left in the chamber to allow the miner to continue working. When the roof has been carried up sufficiently high it is cleared of all loose salt that might in time be detached and left in the form of an arch. The stock of salt in the chamber is then cleared and the floor is worked down as far as possible. Though the present method of working was only introduced in 1869, there are already chambers 250 feet long, 45 feet broad and 120 feet high in the mine. The depth of chambers is determined by the inflow of brine, which prevents further excavation.

The number of miners—men, women and children—is about 600. They are paid 8½ pies per cubic foot, which is equal in weight to 1½ maunds, half an anna in the rupee of their earnings being paid to the lumbardars and gangmen, who supervise the work. All payments are made after measurement of the work. The salt is carried from the mine along a tramway to the Warthgaj Depôt which lies out side the gorge. It is there weighed and made over to traders and removed by the P. N. S. Railway, the Kheura station sidings of which adjoin it, or by other carriage. The total quantity of salt extracted during the past 34 years, that is since the mines have been worked by the British Government, amounts to maunds 39,380,879 or 1,426,236 tons.

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Mayo salt mines.

The mine is well ventilated by numerous drifts. The sanitary arrangements are good, hence, though 600 men, women and children are, during nine months of the year, at work in it, it is always clean. Owing to the constant blasting and the oil lights (*chiraghs*) carried by all the miners the air in the chambers becomes heavy during working hours.

The salt from the Mayo, Nurpur, Wárcha (Shahpur district) and Kálabágh (Bánnu district) mines is consumed in the Panjáb; but it is also taken in large quantities to Benares and Patna, and in lesser quantities to other towns in the North-West Provinces, Oudh and Bengal, and is used by Hindus in their religious ceremonies owing to its purity, and because it is not a manufactured salt. Its consumption and its area of consumption are increasing, and the sales may be expected to increase considerably when a bridge is constructed over the Jhelam at or near Pind Dádan Khán, which will allow of the salt reaching the purchaser without the delay or loss on the way, at present caused by the frequent trans-shipment of the salt. On completion of the bridge the Mayo Mines will be in direct railway communication with the rest of India.

Nurpur Mine.

This mine is kept open to supply salt to the inhabitants of the villages in the neighbourhood of the mine, to enable them to procure it at as cheap a rate as possible. The sales amount to about 4,140 maunds per annum.

Preventive establishment.

Besides the establishment maintained at the Mayo Salt Mines, there is a preventive establishment whose duty it is to guard salt outcrops, which are numerous in most of the gorges of the Salt Range. This establishment consists of six officers, one inspector stationed at Nurpur and five assistant inspectors stationed at Sardi, Malot, Makrách, Kheura and Kushak. They supervise the work of 426 men of all ranks who chiefly remain at 95 guard posts near the salt which has to be guarded. The establishment, officers and men included, is maintained at an annual cost of Rs. 37,853.

Gold.

In the tertiary formations of the Salt Range gold is found in the shape of minute scales, and has doubtless been derived from plutonic and metamorphic rocks, the disintegration of which has furnished the material of which the strata of the series are composed. And in the beds of the numerous *nallahs* or *kasis* which flow through the miocene formations, the sand is washed for gold. It seems to be obtained in the largest quantity towards the Indus, north of the Salt Range. The original beds whence gold is derived have not yet been found. Indeed they cannot be supposed to exist anywhere near the surface of this district. The gold in its comminuted state is evidently derived from the soft upper tertiary sandstones. The process of washing the river sands for gold is as follows:—

When a likely spot in the bed of a *nallah*, generally near the sides of the stream, or above its lowest level, has been fixed upon, the superficial mud is scraped off and lower sand taken out with a wooden shovel and carried to the spot where it is to be washed, close at hand.

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Gold.

The washing is effected in a long wooden box resembling a small flat-bottomed-boat, wide at one end, and narrow at the other, where there is an opening for the escape of the water. The wide end of the cradle or *drún* as it is called, is slightly bent upwards so as to give its flat bottom a gentle inclination towards the fore part. A coarse sieve of reeds is then placed across the wide end of the tray; on this the sand is thrown, and water dashed upon it, till all the finer sand is washed through into the cradle, and the coarse gravel retained on the sieve. By continuing the washing with a gentle stream of water, the lighter particles of fine sand are carried down the inclined floor of the cradle and escape with the water, while the heavier and auriferous sand assumes the highest level, next to the point where the water is applied. In a very short time nothing remains but a thin stratum of black iron sand, in which scales of gold may occasionally be seen to spangle. By continuing the washing still further, the lighter particles are removed, and the auriferous portion concentrated within narrow limits. When the washing in the cradle has been carried as far as is considered safe, the sand is removed by hand into a saucer-shaped platter, called a *kari*, or *phali* or *dagga* made of *sissu* or some other hard wood. In this, by a circular motion, it is agitated with water, and thus an additional portion of the black sand is got rid of by centrifugal motion, and washed away from the inclined sides of the plate by a stream of water skilfully applied. The residue is then rubbed up with a little mercury, which quickly amalgamates with the gold and leaves the black sand. The mercury is then removed from the platter and wrapped in a fragment of cloth, and placed on a bit of live charcoal. The mercury quickly sublimes, leaving the gold entangled only with the ashes of the cloth from which it is freed by rubbing. It is taken next to the goldsmith, who fuses it with borax, and thus it is cleaned. Grains of native platinum are found in the same way in the Indus, and in some places the natives call it "white gold," and despise it exceedingly. The gold-washings of the Salt Range are nearly all in the Jhelam district. It is said that in Hazára grains of gold are sometimes found of such a size as to allow of their being picked out of the sand. Statistics will be found in Chapter IV.

Coal.

Coal occurs in the Salt Range in several places. It is nowhere of true carboniferous age. In this district the deposits are all eocene. They are found in nine separate localities—Bághanwála, Kheura, Pidh, Dandot (3), Makrách, Karúli, and Nurpur. The coal is generally of inferior quality. It is often rather lignite than coal. It is friable, with a brown streak, and a conchoidal fracture. It contains an unusually small proportion of carbon, and is therefore not fit for smelting. It burns rapidly with a thick smoky flame, leaves an ample ash, and often gives off sulphur fumes. In small pieces ground to powder, and mixed with milk, it is used by villagers as an emulcent medicine. Its use commercially for fuel has hitherto not proved successful. Difficulty of carriage is one obstacle, and another is the uncertain quantity of the supply. But within the last few months the coal has been extensively purchased by the Railway authorities

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Coal.

at Pind Dádan Khán. The seams excavated are those at Makrách, where there is an outcrop on the surface. The quality here is said to be good and hard. The engineers pay a fixed price for the coal laid down at Pind Dádan Khán. The Forest Department, within whose rakhs the seams lay, used to permit certain contractors to excavate free; but they charged a royalty of Rs. 2 on every ton raised. The management of coal mining has now been transferred to the Salt Department. It is perhaps doubtful whether the traffic will be permanent. As the excavation penetrates more deeply into the seam, special precautions will need to be taken against spontaneous combustion, and the whole conduct of the work will become more expensive. The seam itself may also be worked out. On the other hand, the enterprize may prove successful; and in such a case it will be necessary to revise the present arrangements.

Coal formations.

The subjoined account of the coal formations of the Salt Range is taken from the "Economic Products of the Panjáb," pp. 27 ff. A detailed report on the coal strata of the Salt Range was published by Dr. Oldham in 1864:—

"In the Salt Range there are two formations of coal or lignite. These I shall distinguish as oolitic coal and tertiary coal.

"I.—*Oolitic coal.*—Among the shales of the oolitic series occurs what is called Kálabágh coal which has to a certain extent been employed as fuel for the Indus steamers. This bed is in a ravine about a mile west of Kálabágh. The coal is found in lumps of various sizes in dark bituminous shales. It does not occur in beds but in detached masses, which appear to be compressed and fossilized trunks of trees; in many cases the junction of trunks and branches can be traced. The occurrence of these masses is altogether irregular and uncertain, and nothing like a systematic working of shaft-cutting to reach it would be in any degree remunerative. 'The coal,' says Dr. Fleming, 'is very hard and light; exhibits a conchoidal fracture in which its woody structure is most apparent. It is of a jet-black color, has a brown streak, and often encloses nests of half-decomposed wood resembling peat.'

"It burns quickly without coking, to a light coloured ash, and emits a large amount of smoky yellow flame; on being distilled, it yields a light spongy coke of a glistening metallic colour, with a large quantity of inflammable gas. On analysis the following results were obtained in 100 parts:—

Carbon (coke)	37·5
Volatile (bituminous inflammable matter)	60·0
Ashes, silica, &c, ...	2·5
	100·0

"The large amount of bituminous matter at once refers the coal to the category of lignite, or coals imperfectly carbonized; the amount of ash is small, which may be accounted for by the solid nature of the wood not admitting of the infiltration of earthy matter.* This coal burns very rapidly, The evaporative power of coal is in direct ratio to the amount of carbon it contains. English coal yields 50 to 70 per cent. of carbon, this coal only 37·5; hence double the quantity of this coal would be required: but still it has twice the evaporative power of wood, which has only 16 to 18 per cent. of charcoal. During 1850, Dr. Fleming tells us 2,500 maunds of this coal were dug, and from 1851 to March 1852, 2,126 maunds, at the rate of eight maunds per rupee, which could not remunerate the miners for any length of time. Calculating that an ordinary steamer burns 600lbs an hour of English coal, and that of Kálabágh coal the consumption would be nearly double, from considerations adduced above,—the whole produce of the year 1850 would keep a steamer going 166 hours.

* Fleming's Report. Selected Correspondence of the Panjáb Government, No. XXII, p. 310.

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Geology, Fauna and Flora.

Coal formations.

"II.—*Tertiary coal.*—The most important series of coal strata in the Range, however, are the beds occurring in the strata of the eocene series. It is principally in the lower alum shales that coal occurs; it is found at many places all along the range, and also across ths Indus in the Chichalli range. The first coal occurs at Bághanwála, ten miles west of Jalálpur, being about half way between it and Pind Dádan Khán. The seam is about 32 feet thick at its widest part, and gradually thins out towards either end. It is enclosed in shales and yellow marl, resting on variegated sandstone. The seam dips conformably with the strata at an angle of 45° or 50° This coal was brought to the notice of Government in 1847. It is very brittle and alternates in parts of the seam with shale, which renders it also very friable. There would be considerable difficulty in sinking shafts on account of the brittle nature and the steep incline of the strata, but Dr. Fleming notices this seam as the most hopeful one to be worked, should Government determine on mining the coal. At Drengan coal again appears, which is probably a continuation of the Bághanwála seam.

"*Kheura.*—This coal was found in 1848, in a seam about two feet thick at the bottom of a roundish hill of nummulitic limestone, in a ravine about a mile to the N. E. of the salt mines. It rests on blue clay containing septaria and crystals of gypsum. In 1849, 500 maunds were extracted, bnt this is not a productive seam, as the extraction appeared to have exhausted it. On the road from Kheura to Choya Saidan Sháh, coal occurs at Pidh. The coal is not so good; it occurs in two seams. At Dandot, Makrách and Nurpur coal occurs in a seam of about two feet thick, of inferior quality, and difficult of access. At the top of Karmiwán above Katha,* shales full of iron pyrites occur, enclosing beds of coal, much more compact and mineralized than most of the other lignites; the seams were only about six inches thick. In 1852 Dr. Fleming remarked that the outcrop of the coal had become concealed by huge masses of limestone thrown down by an earthquake. Between Kutha and the Indus no coal occurs, except in occasional and unimportant films; but at Kutki, in the Chichalli range, among the alum shales, coal was obtained, the miners stating that it occurred only in patches, and not in regular seams; access to it is easy, and it burns well notwithstanding the quantity of earthy matter it contains.

"The coal of the Salt Range, generally, very much resembles that called splint coal, but is soft and brittle. It is not used as fuel by natives, but ground to powder and administered with milk as an *osteocolla* for wounds and broken bones, internally. It is often called *sang-i-salájít*, and sometimes *múmiái*, though *múmiái* properly is hardened bitumen or petroleum. The genuine *múmiái* is derived, it is said, from the Bakhtiári hills in Persia. The coal is difficult to ignite, but when lighted gives out a quantity of smoke having an empyreumatic amount of flame and heat; it leaves, however, a large quantity of ash, in which respect it is unlike the coal of the oolitic series, previously described as found at Kálabágh. Generally speaking, the coal is free from iron pyrites, but some of that brought for trial to the Panjáb Railway was said to have emitted a smell of sulphur during combustion, which is a common fault of lignites generally. The coal is better adapted for combustion than for smelting ores, to which purposes it is not applicable, because it yields but a small amount of coke, and cannot produce the high and continued heat required for smelting operations. The total length through which the coal occurs is 130 miles, in the nummulitic formation. Hence the total quantity in existence must be considerable; but the steep angle at which the seams lie, and the friable nature of the supervening beds, render shaft-sinking difficult. Carriage is also very difficult in many places. The coal is of the kind called brown lignite; it has a brown streak, and when freshly dry a black glossy lustre, like the jet coal above described; it contains occasional nests of a semi-mineralized substance like peat. Some of the Bághanwála specimens, however, that have reached Lahore, are of a much superior character; they are very like real coal, and have a black streak on being scratched. No indications of fossil wood have been obtained in the shales, but one or two shells.

* All the places mentioned in this and the four preceding paragraphs are in the Jhelam district.

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Coal formations.

"The following are Dr. Fleming's analyses of the coals :—

BAGHANWALA, No. 1.

Coke (carbon)	41·36
Volatile (bituminous inflammable matter)	40·64
Ashes	18·00
	100·00

BAGHANWALA, No. 2.

Coke	59·705
Volatile (inflammable matter)	38·455
Ashes	1·840
	100·000

No. 1 was from the upper part of the seam, and No. 2, a remarkably fresh fine specimen, from the centre.

KUTKI, ALUM SHALE PIT-COAL.

(Carbon coke)	35·579
Volatile (bituminous inflammable matter)	36·421
Ashes	30·000
	100·000*

Professor Ansted remarks, that no good coal occurs in England or Europe out of the regular carboniferous series, but oolitic coal is abundant in America; and there does not seem any reason on this account why coal should not be found in India among oolitic and tertiary strata, and capable of being successfully worked. The existence of the seams being indicated, and an analysis of the coal effected, it only remains to make careful and well-judged experiments to determine the ultimate success of coal-mining on the Salt Range; but we must ever bear in mind, and specially with regard to promises of coal in the sub-Himálayan and other tertiary formations, that lignite is apt to occur in detached irregular masses, which are no more indications of a regular workable seam of serviceable coal than the fortuitous discovery of a copper coin is of the propinquity of a copper mine.

Gypsum.

Gypsum occurs in the marl beds above the salt strata of the Salt Range. It is found either in irregular beds or in detached masses. Whenever it occurs in beds, it is much cracked, and the fissures are filled with red marl or a bluish clay. Beds of it seem to lie above and below the salt. In some localities the strata of gypsum are remarkably bent and contorted. The mineral is for the most part of a light grey colour, with a shade of blue, and translucent on the edges. It has a saccharine appearance, but masses in which a coarse crystalline structure prevails are by no means uncommon. Red

* For the sake of comparison, the analysis of several varieties of English coal showing the amount of carbon contained in each, may profitably be consulted.

100 PARTS OF EACH SORT CONTAINED

	Carbon.	Bituminous.	Earth Ash.
Kilkenny coal	97·30	...	3·70
Swansea	73·53	23·14	3·33
Newcastle	58·00	40·00	...
White Haven	57·00	41·30	..

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Coal formations.

varieties also occur (a sample is exhibited from Jhelam), and beds of a dark grey earthy gypsum are generally associated with the saccharine kind. It is nearly a pure sulphate of lime without any carbonate. When calcined, it yields a plaster of Paris, but plaster of Paris without carbonate of lime is less coherent as a cement than when it contains from 10 to 12 per cent. The best plaster would be obtained therefore by mixing some lime with it. Natives only use it mixed with pure lime into mortar, to give a shining marbly appearance to the finer kinds of *chunam* work, and appear to be wholly ignorant of its value as manure. From Pind Dádan Khán any amount might be obtained.

Kálabágh diamonds.

It is in the gypsum of Mári, Kálabágh and Sardi that the beautiful regular quartz crystals (called Kálabágh and Mári diamonds) occur. They are transparent, milky, or red. The specimen marked "Bohemian topaz" in the Jhelam collection of the Lahore Museum consist of small crystals of this quartz, in the form of dodecahedra or double six-sided pyramids, but there is not the six-sided prism so characteristic of quartz. The Kálabágh diamonds are quartz in six-sided prisms, terminated by six-sided pyramids. In the Keila Wan above village Khond, crystals of iron pyrites occur in beds from which a sulphur spring issues, depositing sulphur in the gypsum over which it flows.

Stone.

Stone suitable for road-making, or for railway ballast, is common in most places. Good building stone—both standsone and limestone—is frequently met with. The best quarry is Tarakkiwála near Bakrála. The commoner limestones are also much burned for lime, especially near the south end of the Tilla range. The harder varieties are extensively quarried for *chakkis* or hand-mills. There is one locality specially known as Chakki Par or millstone hill. In one or two places a variegated variety is manufactured into cups and platters and similar fancy ware. Marble of three or four varieties is found among the hills in detached blocks.

Copper.

Galena.

Fragments of copper and earthy iron hæmatites can also be met with, but are quite unimportant. Sulphuret of lead or galena is found in small nodules in two or three localities. That of Mount Karangli is the best. It is much sought after and fetches a high price. Its price ranges from 7 tolas 10 máshas to 10 tolas per rupee. It is chiefly found in clefts in the most inaccessible precipices of the hills; and the peasants who search for it let themselves down the face of the precipice and pick the mineral out of the clefts—a perilous adventure in which lives are often lost, but this pursuit is now seldom practised. A safer but less certain method of obtaining it is to go out after rain and pick up the small fragments by actual search. It is held by the natives to be antimony, and is used as a salve for the eyes. It is called *surma*. He who has faith, and anoints his eyes with the *surma* of Karangli for forty nights shall arrive at such perfection of vision as to see the stars in the daytime.

Clays.

Good clay for pottery, and a lavender-coloured earth which serves for soap, are to be found in some places; but like all the other mineral productions of the district, except stone, and coal, and salt, they are quite insignificant.

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Kallar Shor.

Kallar Shor occurs sporadically over small areas in most parts of the district; but, except in south-west Pind Dádan Khán, its ravages are nowhere important. It begins to attract attention near Dhariála, about ten miles east of the town of Pind Dádan Khán. Thence it spreads upwards into some of the villages of the Phapra tribe; but its inroads in this region are very partial. As we go west the evil rapidly becomes more extensive and serious. In the lands of Pind Dádan Khán Khás there are large tracts which produce nothing but a sick and feeble herbage. Often the ground is quite bare. Further west the state of matters becomes worse. Fortunately the *kallar* is confined to one zone of country about midway between the river and the hills. The lands which are close under the hills or close beside the river escape. It is difficult to say whether there is any increase from year to year in the size of the area affected, and it is probable that any such increase must be infinitesimal. It seems probable that the *kallar* has nearly reached its limit; and that, without a precedent change in the conditions, it is not likely to spread. The immediate causes of the efflorescence are not free from doubt. The following suggestions must be taken for what they are worth. The lands under the hills are all carefully banked up. They thus retain a great deal of the drainage water which sinks into the soil. On the other side the river bed lies high, so that some of the lands near it actually drain away from it. Thus a double drainage collects below the surface of the plain midway between the hills and the river in a position from which there is no escape. Here the water table is raised to within a few feet of the surface. Capillary action sets in; and as fast as the water is raised to the surface by capillarity, it is evaporated by a burning sun, and leaves behind all its solid constituents as a deposit. Nearly all subsoil water contains the material of *kallar*, which it takes up from the soils through which it passes, and thus, so long as capillary action continues, a deposit of *kallar* will *generally* result. This theory, which is mainly taken from the Report of the Aligarh Committee upon *reh*, seems to account for the great difference between the extent of the *kallar* deposit east and west of Pind Dádan Khán, where the apparent conditions are very similar; but in the eastern tract there are a large number of wells in constant work. This keeps the water level down, and prevents excessive capillary action. The *kallar* begins almost exactly where the wells grow few. It is of course true that the well-water which is poured on the soil must itself contain *kallar* in solution; but where there is no constant supply from below, mere surface deposits of this kind are washed down or away by the first rain.*

Flora : Trees.

The táli.

The district flora is not important; but owing to the difference of level it varies a good deal from place to place. Large trees in quantity can only be met with in the Riverain tract. The *táli* or *shísham* is common round Jhelam City and in the Government Belas in the river. It also occurs frequently in other parts of the low plain country. Behind the hills it is rare, and seldom flourishes. Its uses are well known. The leaves and young shoots are browsed by

* On this subject cf. the first Note by Mr. Ibbetson in the Report of the Aligarh Committee.

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Geology, Fauna and Flora.
Kikars.

cattle and camels; and the wood is excellent for boats, carriages, pack-saddles and furniture. The *kíkar* is common all through the alluvial plain, especially in the Jálap *iláka* of Pind Dádan Khán, where it often reaches a large size. In and beyond the hills it does not seem to succeed well. It is probably killed down by the severity of the winter frosts. It is perhaps the most useful of the district trees. The bark goes to the tan yard. The village carpenter uses the wood for ploughs and Persian wheels, while the wright fashions it into carts, and other people burn it for fuel. The *ber* (*Zizyphus jujuba*) is well known near the river, and is not uncommon elsewhere. The wood is good for village house-building and for fuel. The fruit is much relished. A small variety called the *kokan* is used as fodder for cattle, and is said to increase the yield of milk. It ripens its fruit earlier than the large species. The *drek* (*Melia sempervirens*) occurs, but, except in a few places, it is neither plentiful nor important. Villagers use the wood for beams and rafters. Near water very fine specimens of the *bor* or banyan tree (*Ficus indica*) are often met with. One near Jalálpur is well known. The *tút* or mulberry is seen in a few select localities. There are some fine trees at Kallar Kahár. The *siris* and the *sohanjna* are rather garden trees than anything else, and the same is true of the orange and the lime. New lands thrown up by the river are generally covered with the *pilchi* or Indian tamarisk. It never grows big, and is only used for fuel and coarse wattle work. The oriental tamarisk is met with in sub-montane districts along the upper courses of the torrents. It is common in some parts of Láwa aud of the Lilla *iláka*. It is generally called the *pharwáhn* or, in the west, the *rukhi faràsh* is an unknown word in this district.

Bers.

The *Drék.*

The *Bors.*
The *Tut.*

Siris, &c.

Pilchi.
Tamarisks.

Trees in the hills.
The *Phuláhi.*

The *phuláhi* (*Acacia modesta*) is the most common tree in the hills. It is, however, plentiful in the plains also. A few specimens are really good sized trees ; but in general it is merely a large bush. It is perhaps the most important tree in the district, because it is the only one which is really plentiful. Goats and sheep feed upon it. The wood is dark, strong, heavy, and close-grained. Oil-mills, ploughs, well-work, and cart-wheels are all made from it. Next to the *phuláhi* the most common hill wood is the wild olive (*Olœa Europœa*). It is seldom large, but some fine specimens may be seen near water on the top of Diljabba. Goats and sheep browse upon it. The fruit is neither eaten nor crushed for oil. The wood is hard and good, but small. Sticks, combs, charms and rosaries are all made from it. The *kangar* (*Pistacia integerrima*), which is a good wood for furniture, is confined to Mount Tilla as are the *simmal* (*Bombax heptaphyllum*), and the *chikri* (*Buxus sempervirens*). The wild date palm (*Phœnix silvestris*) is common on the same hill, and is also met with in the country near Pind Dádan Khán. On the very summit of Tilla there are some eucalyptus trees, some carobs, two or three *chirs* and a large grove of bamboo. The last of these also occurs in the Civil station of Jhelam.

Date Palms.

Bamboo.

Small Brushwood.
The *Jahli.*

The *jáhli* or *wan* (*Salvadora persica*) is sometimes a tree, but more commonly spreads into a bushy undergrowth. The berries called *pílú* are much sought after. Mr. Thomson has known them to

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The *Karil.*

be exchanged for wheat, weight for weight, in times of considerable scarcity. The *karil (Capparis aphylla)* is common on rough lumpy ground. It never becomes a tree. The ripe fruit *(pinju)* is eaten, and the half-ripe is pickled *(dela)*. The wood is used for fuel and for light lathery in village houses. The *chichara* or *dhak* is a common shrub, and is said to be a sign of fertility. The *ak* and the *phutaki* need only be mentioned. The *ganira (Nerium odorum)* is common in beds of most *kasis*. Its leaves are said to be poisonous. Animals bred in the district from indigenous stock always avoid it; but imported strangers have no such instinct. Mr. Thomson says that he has himself seen instances of this. *Lána* of two kinds, both called *Lána*, is fairly abundant, but of no use except as camel fodder. The true carbonate of soda variety is not met with here, although it is common in Shahpur; but by far the most common hill shrubs are *báhikar* and *sinetta (Adhatoda vasica* and *Dodonœa burmaniana)*. *Bahikar* grows almost anywhere. It is of little or no use for fodder, but makes an excellent fuel for the small native lime kilns. It is a pretty bush, and very characteristic of many hill sides and high lying valleys. The flowers are white, with rather an evil smell but much beloved of bees. The *sinetta* often covers the entire slope of a hill and grows to a considerable size. It is a pleasant-looking shrub with bright green leaves. It is used for fuel and for light roof-work in village houses.

Ganira.

Lána.

Bahikar.

Sinetta.

Grasses : *Sarr* grass.

There are many grasses in the district, but most of them are insignificant. The most valuable is the *sarr (Saccharum munja)*. It occurs principally in loose sandy soil near the bed of some hill stream. It is generally self-sown; but it is sometimes planted as a boundary or as a protection from drifting sand. It grows in large stools often twelve feet high. The lower part is formed of thick reeds called *kána*; out of this springs the *till* which carries the flower, and the whole is wrapped round by the leaf called *munj*. *Kána* is used for rafters when wood is scarce, and from it are made the heavy baskets from which cattle get their feed. The *till* is useful for all light basket-work, while the *munj* is the common material for village rope-making. Of other fodder grasses, *khabal* is generally considered the best. *Sawánk* is also very good. It grows much in *bájra* fields. The poorer classes sometimes eat the seeds called *thir*. *Dab* grass is common and is well known. The *belas* in the river produce the *káhi* which is useful for thatching, and there is a very handsome and fragrant variety called *chita* to be met with upon Tilla.

Khabal and *Sawánk* grasses.

Fauna : Wild beasts.

The fauna of the district is not very interesting. Domestic animals are noticed hereafter. Of wild animals the leopard *(Felis pardus)* occurs in small numbers all down the hills from Tilla to Nárpur. It preys upon *uriál* or any sheep and goats it can pick up. It is usually let alone unless it gives serious trouble. Some very large specimens are occasionally brought in from the west of the district. The Indian hyæna *(Hynœa striata)* is not common; but it is sometimes met with in the rocky gorges of the hills. Wolves and jackals are also to be found in many places. In the five years ending 1882, Rs. 415 were paid as reward for the destruction of 174

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Fauna : Wild beasts.

leopards, 56 wolves, 336 snakes and three other wild animals. The *uriál* (*Ovis cycloceros*) is well known in the district. It is met with on most hills, but is very rare north and east of the Trunk Road. Its favourite haunts lie near Jalálpur, Kotal Kund, and Núrpur (Sihati). It is seldom seen on Tilla. The ravine deer (*Gazella Bennetii*) is scarce; but can be found in the broken ground below the hills from Kheura to Núrpur. The common hare also occurs in the same places, but it is rare among the rare. There are crocodiles in the river, and most of the ordinary snakes and lizards upon dry land. Among fish the only one worth mention is the mahseer, which is common on the upper course of the Jhelam. The favourite place for mahseer-fishing is Dhangrot near Sultánpur. There are no fisheries, properly so called, in the district; nor is fish a common article of food with the people. A few fishermen, however, find employment in supplying the European community with fresh fish.

Reptiles.

Fish.

Birds.

Among birds there are the blue rock pigeon (*Columba intermedia*) in the cliffs of the Salt Range, and the Indian stock pigeon, which visits the plains in the cold season. The Himalayan cushat is met with in the western hills. It has been shot in July and September, and would therefore seem not to migrate. The large sandgrouse (*P. arenarius*) is plentiful in Talagang tahsíl, and in the plain country round Jhelam and Pind Dádan Khán. The small sandgrouse (*P. exustus*) is also common in the stubbles of *bájra* and *moth*. Black partridges are not met with, but the grey variety occurs though rarely. *Chikor* and *susi* are fairly plentiful throughout the higher grounds. The common quail is said to breed here. It can often be met in fields of wheat and barley. The rain quail is found near the river in the season. Snipe are rare, but both varieties can be shot occasionally in the old bed of theKahán. *Kulan* are plentiful near the river in the cold season, and the curlew, the grey goose, and the three-barred Indian goose are not unknown. Of ducks, among others, the mallard, the teal, and the widgeon are all found in the proper season; and there are flocks of flamingo on the lake of Kallar Kahár. The *obára* is rare, but in the west it may be shot from November to February. *Tára mira* fields are its favourite haunt morning and evening. Most common birds of the Panjáb which are not game also occur here. Among insects the only one worth mention is the wild bee. Very good honey can be obtained in many places, especially near *báhikar* bushes.*

Insects : Bees.

Native sport.

In the western portion of the district there is a curious method adopted by the people for catching cranes. The instrument, a simple stone attached to a long string, is used with great dexterity, much in the same way as the American lasso. The sportsman advances as close as he can to a flock of cranes, and throwing his stone as they take to wing, generally secures a bird in the coils of the string. Sometimes a pair of bullocks is used as a screen to enable the bird-catcher to approach unobserved. *Chikor* and partridges are netted. A net is attached in a semicircle to small bushes, into which the birds are driven or enticed by call-birds from a distance. The fright caused

* Much of above is taken from "A Monograph on the Game Animals of the district" by Mr. Frederic Field, Extra Assistant Commissioner.

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Extermination of game.

by the sudden apparition of the bird-catcher causes them to become entangled in the net where they fall an easy prey. The *uriál* which is the most characteristic game animal that the district affords, is fast becoming exterminated. For some years past they have been extensively caught by the villagers by means of *kurkáris*, a sort of iron fox trap, which are set round cultivated fields at night in narrow openings in the hedge, purposely left for the animals to enter by. Some small patches of wheat were pointed out to Mr. Wynne in which as many as 14 *uriál* were said to have been killed during a single season; and neither sex nor age is spared.

CHAPTER II.

HISTORY AND ANTIQUITIES.

Chapter II.

History and Antiquities.

Early history and antiquities.

The Salt Range is famous in early Hindu tradition as the place of refuge of the Pándavas while in exile; and Katás and other places in the range are rich in associations with these heroes of remote antiquity. Many theories have been founded upon obscure passages in the Puráns, interpreted by the aid of Greek historians, Chinese chronicles, antique nomenclature, and all the other resources of archæology. The antiquities of the district are fully discussed by General Cunningham in his *Archæological Survey Reports*, Vol. V, pages 79 to 97; Vol. II, pages 172 to 185 and 188; and Vol. XIV, pages 41-42; and in his *Ancient Geography of India*, pages 124 to 129 and 159 to 177. But the results arrived at are somewhat doubtful, and there are no really authentic accounts of the state of the district previous to the expedition of Alexander the Great; yet a summary of the conclusions arrived at may not be without interest, and it will be well first to notice the principal places of archæological interest.

Katás.

The following account of Katás is extracted from General Cunningham's Archæological Report, Vol. II, p. 188. (See further also Vol. V, pages 85 to 90 and 90 to 93):—

"The holy fountain of Katás is, next to Jawálamuki, the most frequented place of pilgrimage in the Panjáb.* The Brahmanical story relates that Siva was so inconsolable for the death of his wife Sati, the daughter of Daksha, that the tears literally 'rained from his eyes,' and formed the two sacred pools of Pushkara or Pokhar, near Ajmere, and Katáksha or Katás in the Sindh-Ságar Doáb. Katáksha means the 'raining eyes,' but the ignorant Bráhmans of the place spell the name Ketáksha, and Kettáksha, although they give it exactly the same meaning. The pool is partly artificial, the rock having been cut away to enlarge the natural basin in the bed of the Ganiya Nala. Just above the pool there is a strong masonry wall 2½ feet thick and 19 feet high, which once dammed up the stream so as to form a large lake: but only the land portions are now standing, and the water disappears entirely amongst the broken rocks and ruins of the embankment. The Bráhmans say that the dam was built by Rája Patak, the Dewán or minister of some King of Delhi, for the purpose of turning the water away from the holy pool of Katáksh. There certainly is a channel cut through the rock, for 122 feet in the length which would have carried off the waters to a point below the tank, but as there are springs in the pool itself, it seems more probable that the dam was made to retain water for irrigation. This channel was originally a tunnel, but the roof has fallen in, and the rock still overhangs on both sides in rough unchiselled masses. The pool is irregular in shape, but it may be described as 200 feet in length, with an extreme breadth of 150 feet at the upper end, and about 90 feet at the lower end, where it is closed by a low stone causeway, six feet broad, with three narrow openings for the passage of the water. After heavy rain the swollen stream passes clear over the causeway. The water is pure and clear, but the fish are said to die annually.

"Katás is situated on the north side of the Salt Range, 16 miles from Pind Dádan, and 18 miles from Chakwál, at a height of more than 2,000 feet above the sea. About 800 feet below the pool, the Ganiya Nala passes between the two flat-topped hills, about 200 feet in height, on which the ancient town is

* General Cunningham is here speaking of the Punjab, properly so called, to the north of the Satlaj. The Kuruchetra in Ambála and Karnál is more frequented than either of these shrines.

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Katás.

said to have stood. On the west hill, named Kotera, I traced several walls and towers of the old fortifications, and the remains of a brick building which the people call Sádu-ka-Makán, or Sádu's house. The bricks are $14\frac{1}{2}$ by $9\frac{1}{2}$ by $2\frac{1}{2}$ inches. In the middle of the north side of the hill I traced the walls of a gateway leading down to a lower enclosure, at the east end of which stand the Sat-Ghara or 'seven temples.' These are the only ancient remains of any interrest that now exist at Katás. The upper fort is 1,200 feet long by 300 feet and the lower fort 800 feet by 450, the whole circuit being about 3,500 feet, or less than three-quarters of a mile. But the whole circuit of Katás, including the ruins of the town on both banks of the stream above and below the fort, is about two miles.

The Sat-Ghara.

"The Sat-Ghara or 'seven temples' are attributed to the Pandus, who are said to have lived at Katás during a portion of their twelve years' wanderings. On examining the place carefully I found the remains of no less than twelve temples, which are clustered together in the north-east corner of the old fort. Their general style is similar to that of the Kashmír temples, of which the chief characteristics are dentils, trefoil arches, fluted pillars, and pointed roofs, all of which are found in the temples of Katás and of other places in the Salt Range. Unfortunately these temples are so much ruined that it is impossible to make out their details with any accuracy; but enough is left to show that they belong to the later style of Kashmírian architecture which prevailed under the Karkota and Varmma dynasties, from A.D. 625 to 939; and as the Salt Range belonged to the kingdom of Kashmír during the greater part of this time, I believe that these temples must be assigned to the period of Kashmírian domination. The temples of Malot and Katás have been described by General Abbott,* but others exist at Sib-Ganga near Malot, and at Bághanwála equidistant from Pind Dádan and Jalálpur. Those of Malot, and Bághanwála are the least ruinous; but they are all built of the same soft friable sandstone, which has now crumbled away so much that the details of the mouldings are no longer distinguishable with any certainty.

"The Sat-Ghara group of temples is formed of six smaller temples placed in pairs at regular distances about one large central fane, and this again is connected with the remains of a very large temple which is situated due east, 170 feet distant. The whole of the smaller temples have been so often restored and plastered that they have suffered more from the repairs of men than from the ravages of time. The body of the central fane is now altogether hidden by a thick coat of plaster, the unfortunate gift of Guláb Singh. The great ruined fane to the east consists of a mound of ruins resting on a basement $68\frac{1}{2}$ feet long by $56\frac{1}{2}$ feet broad, which is in rather better preservation than the Sat-Ghara temples. Its design, too, is quite different, as it is divided into a number of small panels or recesses by broad pilasters after the style of the tope basement at Manikiála. There is nothing now remaining about the basement to show whether it belonged to a Buddhist tope or a Bráhminical temple; but over the doorway of a modern temple to Ráma Chandra, which is close by on the north side, there is a three-headed and four-armed male figure that is said to have been found in the mass of ruins overlying the basement. The statue is of red sandstone three feet high. The three heads are different,—in the middle a man, to the right a boar, and to the left a lion. This differs from every other three-headed statue that I have yet met with; but it is, I believe, a representation of Vishnu as the Supreme Being, the man's head being Vishnu Narayána, the creator, the boar's head Vishnu Varáha, the preserver of the universe, and the lion's head, Vishnu Narshinga, the destroyer. There is nothing else about the figure to show what it is intended for, as there are only lotus flowers in three of the hands, and the fourth rests on the hip."

Modern Katás.

Mr. Thomson thus describes Katás as it is at present:—

"It consists of a large, square-shaped pool, set among rocks, and apparently welling up from a spring in the dry bed of a hill torrent. Round this pool has arisen a little Hindu colony. There are Bráhmans who are its custodians, and *fakírs* of all sorts who quarrel over the offerings of the pilgrims. The pool is said to be one of Siva's eyes which dissolved in tears for the death of his

* Bengal Asiatic Society's Journal, 1849, p. 131.

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wife. The other eye, which also dissolved, is still weeping near Ajmere. General Cunningham disputes this account, and claims a Buddhist origin for the shrine. He also thinks he can trace an ancient city round about it; but this is probably a delusion Doctor Fleming sounded the pool at several points and found it about 23 feet deep. The water is very good, and irrigates the whole valley of Choya Saidan Sháh. Katás itself is singularly picturesque; and the ride from there to Choya Saidan Sháh is one of the most beautiful in the district. A large fair is held at Katás and another at Choya Saidan Sháh—both in the late spring time about the beginning of the hot weather."

Malot.

About 12 miles to the south-east of the tanks of Katás is the village of Malot, the ancient capital of Rája Mall, the ancestor of the Janjúa tribe, who is variously said to have been either a contemporary or a descendant of the heroes of the Mahábhárata. Here is a temple finer and said to be older than that of Katás, and having some very remarkable fluted Ionic or Bactrian columns on each front. Mr. Thomson remarks that, though the temple is undoubtedly framed on a Greek model, the sculptures are patently and disagreeably Hindu. Its site is most remarkable. Placed almost on the edge of one of the highest precipices of the range, and projecting somewhat from the general line, it commands one of the most extensive views to be found in Salt Range, over the Jhelam, the Chenab and possibly the Rávi, with the mountain of the Koh Kerána in the Sháhpur district, in the centre of the view. This village of Malot is the ancestral village of all the Janjúas. The hill is crowned by a fort, built by the father of Ranjít Singh. General Cunningham identifies Malot with Huen Thsang's Singhapura, the old capital of the Salt Range (see above, and also *Ancient Geography,* pages 124 to 129; and *Archæological Survey Reports*, Vol. V, pages 85 to 90).

Sib-Ganga.

At Sib-Ganga near Dalwál is a Buddhist temple, situated three miles to the east of Malot. It is a building of red sandstone with triglyph arches and pyramidal mouldings, and carved with figures of animals. There is also a small tank formed in the bed of a stream somewhat resembling that of Katás. At this spot Major Abbott obtained an undoubted sculptured head of Alexander as Jupiter Ammon.

Bághanwála.

Bághanwála lies somewhat further to the east at the foot of the Salt Range, 11 miles north-west of Jalálpur. Here is a ruined Buddhist temple situated on an eminence, which appears older even than the Katás temple. There are other old remains near it.

Rotás.

The famous fort of Rotás, built by Sher Sháh, about the year 1540, during the time of his usurpation of the Imperial crown, as a check on the Ghakar tribe, is situated on the hills surmounting the western side of the gorge through which the Kahán *naddi* passes the southern of the two spurs of the Salt Range already described. It is just 11 miles to the north-west of the town of Jhelam. The walls of this fortification extend for three miles, circling the rocks which command the entrance of the pass, and are in some parts from 30 to 40 feet in thickness. The total area enclosed by the fortifications is 260 acres. The walls are now more or less in ruins, but enough remains to form a most striking and impressive scene. One gateway, known as the Soheli gate, is still in very good preservation.

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Tilla.

The shrine of the *jogis* on the top of Tilla is noticeable. It is certainly very ancient, and was probably originally dedicated to the worship of the sun-god. It is maintained in the Ain Akbari as a much venerated shrine. It is now tended by a sort of corporation of *jogis* headed by a *mahant*. They are not a very estimable body; but they are held in considerable regard even by Muhammadans, and have Hindu disciples away beyond our border.

Minor antiquities.

Besides the places mentioned above, there are many other spots of antiquarian interest in the Salt Range. Such are the ruins of the ancient city of Girjhak above Jalálpur, once a stronghold of the Janjúas, and of the great city and fort of Makhiála, founded by Wír, the ancestor of the eastern Janjúas and the capital of his descendants; the precipitous hill crowned by the fort of Kusak, where Ranjít Singh besieged the last chief of the Janjúas for nearly six months in vain until he was forced to surrender from want of water. All these, and a hundred other spots, are associated with stories of antiquity, but none seem to require special notice.

The Takkas.

The Takkas are the first race of whom any traces can be discovered. They seem to have occupied almost the whole of the Upper Sind-Ságar Doáb, and to have been by no means without civilization. The Lunde character, which is still in use, is said to have been either invented or adopted by them. They also built towns. Attock was perhaps one of their settlements, but their chief seat was Takkasila or Taxila, which has been identified with Shah Dheri near Hasn Abdál. In religion they were worshippers of serpents, but at some early period—probably about B.C. 1000—this people was pressed upon, and either displaced, absorbed, or exterminated by a double immigration. On the east a Turanian race occupied the hills of tahsíl Jhelam. The Salt Range and the plains beyond it were seized by different tribes of Lunar Rájpúts. From the first set of immigrants General Cunningham would derive the modern Ghakars, and from the second the Janjúas and Awáns.

Ghakars and Janjúas.

Alexander the Great.

This tribal distribution is thought to have obtained at the arrival of Alexander. The Greeks seem to have found a social system and habits of life greatly, but not radically, different from those which still exist. Their march to the banks of the Jhelam was unopposed; but the actual passage of the stream was not affected without a battle. The scene of this struggle has been variously identified. It seems certain that Alexander must have marched to the river along either the valley of the Kahán or the valley of the Bunhá. The first route would have brought him to the present city of Jhelam, and the second either to Jalálpur or Dárapur. The earlier identifications pointed to Jhelam; but General Cunningham seems to have given good reason for fixing Alexander's camp at Jalálpur, the battle with Porus at a village called Mong on the Gujrát side of the river, nearly opposite Jalálpur and close to the field of Chiliánwála, and his actual passage of the river in the neighbourhood of Dárapur (June B.C. 326). Wherever the camp was, Alexander there founded the city of Bukephala. His subsequent advance to the Satlaj does not concern this district; but while it was in progress, his lieutenants by his orders built on the Jhelam that fleet of galleys which

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afterwards made the celebrated voyage from the Indus to the Euphrates. His name is still well known to the people, and near Jalálpur they show an indentation on a huge boulder which they call the hoof mark of Alexander's horse. This is the more remarkable, as Bucephalus would actually seem to have been buried close by.

The ancient Bukephala.

The site of the famous city of the Bukephala General Cunningham places at Jalálpur, a town of which he gives the following account*:—

"The town of Jalálpur is situated on the west bank of the Jhelam at the point where the Kandár ravine joins the old bed of the river. The stream is now two miles distant; but the intervening ground, though partially covered with small trees, is still very sandy. The town is said to have been named in honour of Akbar, in whose time it was most probably a very flourishing place; but since the desertion of the river, and more especially since the foundation of Pind Dádan Khán, the place has been gradually decaying, until it now contains only 738 houses, with about 4,000 inhabitants. From the appearance of the site I estimated that the town might formerly have been about three or four times its present size. Its old Hindu name is said to have been Girjhak. * * * The people still apply the name of Girjhak to the remains of walls on the top of the hills, which rise 1,000 feet above the town. Its antiquity is undoubted, as the coins which it yields reach back to the times of Alexander's successors; but I believe that it is much older, as its favourable position would certainly have led to its occupation at a very early period."

"We have now to examine," he continues, "how the river and the country about Jalálpur will agree with the recorded accounts of Alexander's operations in his passage of the Hydaspes and subsequent battle with Porus. According to Arrian 'there was a high wooded promonotory on the bank of the river, 150 stadia, or just 17¼ miles above the camp, and immediately opposite to it there was a thickly wooded island.' Curtius also mentions the wooded island as 'well fitted for masking his operations.' 'There was also,' he adds, 'not far from the spot where he was encamped, a very deep ravine (*fossa prœalta*) which not only screened the infantry, but the cavalry too.' We learn from Arrian that this ravine was not near the river, because 'Alexander marched at some distance from the bank, lest the enemy should discern that he was hastening towards the promonotory and island.' Now, there is a ravine to the north of Jalálpur which exactly suits the descriptions of both historians. This ravine is the bed of the Kandár Nala, which has a course of six miles from its source down to Jalálpur, where it is lost in a waste of sand. Up this ravine there has always been a passable but difficult road towards Jhelam. From the head of the Kandár, which is 1,080 feet above the sea, and 345 above the river, this road proceeds for three miles in a northerly direction down another ravine, called the Kasi, which then turns suddenly to the east for 6½ miles, and then again 1½ miles to the south, where it joins the Jhelam immediately below Diláwar; the whole distance from Jalálpur being exactly 17 miles. I marched along this ravine road myself, for the purpose of testing the possibility of Alexander's march, and I satisfied myself that there was no difficulty in it, except the fatigue of making many little ascents and descents in the first half, and of wading through much heavy sand in the latter half. The ravine lies 'at some distance from the bank,' as described by Arrian, as the bend in the *kasi* is seven miles from the Jhelam. It is also 'a very deep ravine,' as described by Curtius, as the hills on each hand rise from 100 to 250 and 300 feet in height. Therefore in the three leading particulars which are recorded of it, this ravine accords most precisely with the accounts of the ancient historians.

"Amongst the minor particulars there is one which seems to me to be applicable only to that part of the river immediately above Jalálpur. Arrian records

* Archæological Report, 1863-64, p. 176. In this report General Cunningham inclines to believe the town of Diláwar on the opposite bank of the Jhelam to mark the site of Bukephala, but he definitely accepts the Jalálpur site in his "Indian Geography," published several years later.—*Ancient Geography*, I, p. 177.

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The ancient Bukephala.

that Alexander placed running sentries along the bank of the river, at such distances that they could see each other, and communicate his orders. Now, I believe that this operation could not be carried out in the face of an observant enemy along any part of the river bank, excepting only that one part which lies between Jalálpur and Diláwar. In all other parts the west bank is open and exposed, but in this part alone the wooded and rocky hills slope down to the river, and offer sufficient cover for the concealment of single sentries. As the distance along the river bank is less than ten miles, and was probably not more than seven miles from the east end of the camp, it is easy to understand why Alexander placed them along this line instead of leaving them on the much longer route, which he was to march himself. Another minor particular is the presence of a rock in the channel of the river, on which according to Curtius, one of the boats was dashed by the stream. Now, rocks are still to be found in the river only at Kotéra, Manála, Malikpur, and Sháh Kamír, all of which places are between Diláwar and Jalálpur. The village of Kotéra is situated at the end of a long wooded spur, which juts out upon the river just one mile below Diláwar. This wooded jutting spur, with its adjacent rock, I would identify with the *akra* or promontory of Arrian, and the *petra* of Curtius. Beyond the rock there was a large wooded island which screened the foot of the promontory from the observation of the opposite bank. There are many islands in this part of the Jhelam, but when a single year is sufficient to destroy any one of these rapidly formed sandbanks, we cannot, after the lapse of more than 2,000 years, reasonably expect to find the island of Alexander. But in 1849, opposite Kotéra, there was such an island, 2½ miles in length and half a mile in breadth, which still exists as a large sandbank. As the passage was made in the height of the rainy season, the island, or large sandbank would naturally have been covered with tamarisk bushes, which might have been sufficiently high to screen the movements of infantry and dismounted cavalry.

Alexander's battle with Porus.

"The position of the two camps I believe to have been as follows: Alexander, with about 50,000 men, including 5.000 Indian auxiliaries under Mophis of Taxila, had his head-quarters at Jalálpur, and his camp probably extended for about six miles along the bank of the river, from Sháh Kamír, two miles to the north-east of Jalálpur, down to Syadpur, four miles to the W. S. W. The head-quarters of Porus must have been about Muhabatpur, four miles to the W. S. W. of Mong, and three miles to the south-east of Jalálpur. His army of nearly 50,000 men, including elephants, archers, and chariots, must have occupied about the same extent as the Macedonian army, and would, therefore, have extended about two miles above, and four miles below Muhabatpur. In these positions, the left flank of Alexander's camp would have been only six miles from the wooded promontory of Kotéra, where he intended to steal his passage across the river, and the right flank of the Indian camp would have been two miles from Mong, and six miles from the point opposite Kotéra.

"As my present object is to identify the scene of Alexander's battle with Porus, and not to describe the fluctuations of the conflict, it will be sufficient to quote the concise account of the operation which is given by Plutarch from Alexander's own letters. 'He took advantage of a dark and stormy night, with part of his infantry and a select body of cavalry, to gain a little island in the river at some distance from the Indians; when he was there, he and his troops were attacked with a most violent wind and rain, accompanied with dreadful thunder and lightning.' But in spite of the storm and rain they pushed on, and, wading through the water breast-high, reached the opposite bank of the river in safety. 'When they were landed,' says Plutarch, who is still quoting Alexander's letters, 'he advanced with the horse 20 stadia before the foot, concluding that, if the enemy attacked him with their cavalry, he should be greatly their superior, and that if they made a movement with their infantry his own would come up in time enough to receive them.' From Arrian we learn that as soon as the army had begun fording the channel between the island and the main land, they were seen by the Indian scouts, who at once dashed off to inform Porus. When the ford was passed with some difficulty, Alexander halted to form his little army of 6,000 infantry and about

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Alexander's battle with Porus.

10,000 cavalry. He then 'marched swiftly forward with 5,000 horse, leaving the infantry to follow him leisurely and in order.' While this was going on Porus had detached his son with two or three thousand horse and one hundred and twenty chariots to oppose Alexander. The two forces met at 20 stadia, or 2¼ miles from the place of crossing, or about two miles to the north-east of Mong. Here the chariots proved useless on the wet and slippery clay, and were nearly all captured. The conflict, however, must have been a sharp one, as Alexander's favourite charger, Bucephalus, was mortally wounded by the young prince, who was himself slain together with 400 of his men. When Porus heard of the death of his son, he marched at once against Alexander with the greater part of his army; but when he came to a plain, where the ground was not difficult and slippery, but firm and sandy, and fitted for the evolutions of his chariots, he halted and arrayed his troops ready for battle. His 200 elephants were drawn up in front of the infantry about one plethorn, or 100 feet apart, and the chariots and cavalry were placed on the flanks. By this arrangement, the front of the army, facing north-east, must have occupied an extent of about four miles from the bank of the river to near Lakhnawáli, the centre of the line being, as nearly as possible, on the site of the present town of Mong. Around this place the soil is 'firm and sound,' but towards the north-east, where Alexander encountered the young Indian prince, the surface is covered with a hard red clay, which becomes both heavy and slippery after rain.

"When Alexander saw the Indian army drawn up in battle array, he halted to wait for his infantry, and to reconnoitre the enemy's position. As he was much superior to Porus in cavalry, he resolved not to attack the centre where the formidable line of elephants were supported by masses of infantry, but to fall upon both flanks and throw the Indians into disorder. The right wing, led by Alexander himself, drove back the enemy's horse upon the line of elephants, which then advanced and kept the Macedonians in check for some time. Wherever Porus saw cavalry advancing, he opposed elephants, but these slow and unwieldy animals 'could not keep pace with the rapid evolutions of the horse.' At length, the elephants, wounded and frightened, rushed madly about, trampling down friends as well as foes. Then the small body of Indian horse being surrounded was overpowered by the Macedonians, and nearly all slain; and the large mass of Indian infantry, which still held out, being vigorously attacked on all sides by the victorious horse, broke their ranks and fled. 'Then,' says Arrian, 'Kraterus and the captains who were with him on the other side of the river, no sooner perceived the victory to incline to the Macedonians, than they passed over and made a dreadful slaughter of the Indians in pursuit.'

"From the last statement, which I have quoted, it is clear that the battle field was within sight of Alexander's camp. Now is this especially true of the plain about Mong, which is within easy ken of the east of Alexander's camp at Sháh Kamír, the nearest point being only two miles distant. With this last strong evidence in favour of Jalálpur as the site of Alexander's camp, I close my discussion of this interesting question. But as some readers, like Mr. Grote, the historian of Greece, may still think that General Abbot has shown 'highly plausible reason' in support of his opinion that Alexander's camp was at Jhelam, I may here point out that the village of Pabrál, which he has selected as the battle-field, is not less than 14 miles from Jhelam, and therefore quite beyond the ken of Alexander's camp. I may quote also his own admission that the bed of the Sukhetr river, a level plain of sand one mile in width, 'is a torrent after heavy rain, and is so full of quicksands as to be unsuited to military operations.' Now, this very Sukhetr river actually lies between Pabrál and the site of the Indian camp opposite Jhelam, and as we know that a heavy storm of rain had fallen during the preceding night, the Sukhetr would have been an impassable torrent at the time of the battle. And so also would have been the Jaba river, which joins the Jhelam just below the Sukhetr. With these two intervening rivers, which, whether wet or dry, would have been obstacles equally great to the march of the Indian army and more especially to the passage of the war-chariots, I am quite satisfied that the battle-field could not have been to the north of the Sukhetr river."

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Tribal colonisation.

The political history of the district is unimportant; and its annals consist of little more than the story of its gradual colonisation by the tribes which at present inhabit it, and the varying fortunes of each. The broad outlines of that colonisation will be sketched in the following pages; while further details regarding the history of the individual tribes will be found in Section C of Chapter III in which they are described. The most important of these tribes are the Ghakars, Awáns, Janjúas and Jats. They are distributed at present in distinct tracts; and it is possible to mark off on the map of the district the portion which each occupies. The Awáns hold the whole of the western end; the Janjúas hold the main Salt Range; and the Jats the Dhanni country or the tract in the centre of the district to the north of the Salt Range; while the Ghakars occupy, with a small exception, the whole eastern corner of the district, including the eastern spurs of the Salt Range.

Scythian immigrations.

From the departure of Alexander nothing is known with any certainty until the arrival of the Muhammadans nearly thirteen hundred years afterwards. The Kathæi, the kings of Pataliputra, and the Bactrian Greeks, seem to have exercised in succession a general supremacy over the tribes of the district. But about 126 B.C. an event happened which led to more permanent results. The Dahæ, the Sacæ, and the Massagetæ, three tribes belonging to the Scythian horde known as Su or Abars, being hard pressed by their neighbours, abandoned their homes in Sogdiana and began to move towards India. The Sacæ and Massagetæ for the most part halted by the way; and only the Dahæ penetrated in large numbers beyond the Indus. Of these Dahæ the two main sub-divisions were the Medi and the Iatii, whom General Cunningham identifies with the Meds or Mends, and the Jats of the present day. Their migration seems to have taken place principally by Kandahar and the Bolan into Sinde; but some tribes followed the upper routes, and from Sinde the main body spread rapidly in every direction. By about 40 B.C. the news of the movement had reached Rome, and Virgil could describe the Hydaspes as a river of the Meds.*

The Jats.

The Gujars.

About fifty years later the Yuchi—a kindred Scythian horde—also moved southward. They soon split into two parties. The Great Yuchi settled in and around Kábul; the Little Yuchi established themselves in Peshávar, and spread thence into the Doábs. The great name among them is King Kanishka, who flourished about 50 B.C. He embraced Buddhism, and proved a most effective missionary. After his death his kingdom seems to have held together until the third century A.D. Thereafter it decayed, and nothing further is known of the state of the district until the arrival of Máhmúd of Ghazni. These Little Yuchi are identified by General Cunningham with the modern Gujars. His arguments are very recondite, and not very conclusive even to himself.

* Medus Hydaspes (Geor. IV. 210). It is unnecessary to add that the Hydaspes is the Jhelam. It is not likely that Virgil thought it a river of Medea.

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Muhammadan Rule.

Bábar.

Akbár.

Divisions of the district under Akbar.

Máhmúd of Ghazni commenced a very thorough Islamization of the district. What he left undone was completed by Shaháb-ud-dín Ghori (*circa*, A.D. 1200). Henceforward the various tribes paid an imperfect obedience to the Muhammadan princes who in succession rose to power. They seem to have been little interfered with, and carried on their mutual struggles without disturbance from without. When Bábar first marched to the Jhelam in 1523, the Janjúas at once submitted to him. The Ghakars at first resisted, but were afterwards won over, and rendered active aid. When Humáyún was driven out by Sher Sháh, the Ghakars refused to acknowledge the new ruler. They reaped the reward of their fidelity when Humáyún was restored again. Under Akbár the whole district was included in the Sind-Ságar Sirkár, which seem to have been generally equivalent to the present districts of Ráwalpindi, Jhelam and Shahpur. It is impossible, however, to identify many of the 42 Mahàls into which it was divided. In this district the only names which can be recognized with much certainty are those given below:—

	Mahal.	Assessment in *dáms*.
1.	Awan	415,970
2.	Beloky Dhen (? Malluki Dhan)	1,316,801
3.	Terchak Damy (? Tirchak)	250,575
4.	Haweli Rohtas	6,043,140
5.	Dhenkot (here is a salt pit) (? Dhandhot)	480,000
6.	Dherab (? Darabi)	96,000
7.	Kharderwazah (Kadirpur)	24,541
8.	Kerchak (? Girjakh)	961,755
9.	Makhyaleh (Makhiala)	384,000
10.	Melote (has a stone fort) (? Malot)	133,233
11.	Shamsabad (? Old name of Pind Dadan Khan ??)	7,034,503

Mughal Revenue.

Mughal prices.

The exact boundaries of these Mahàls cannot be fixed. Most of them were clearly extensive tracts of country; but some—like Kharder—must have been made up of two or three villages. Forty *dáms* are about equivalent to one of our present rupees. In estimating the weight of Akbar's assessment it must be remembered that the Sind-Ságar Sirkár was liable for a military contingent of nearly 80,000 men. The value of money, too, seems to have been vastly greater then than now. It is difficult to give credit to Abul Fazl's prices-current; but as the subject is interesting, it may be worth while to give his rates for the principal items:

Wheat	per maund	... ...	12 *dáms*.
Barley	"	... ...	8 "
Pease	"	... ...	6 "
Mustard seed	"	... ...	12 "
Mung	"	... ...	18 "
Másh	"	... ...	16 "
Moth	"	... ...	12 "
Jowár	"	... ...	10 "
Millet	"	... ...	8 "
Gur	"	... ...	56 "
Salt	"	... ...	16 "
Kuli	per diem	... ...	2 "
Well-cleaner	"	(summer)	3 "
Do.	"	(winter)	4 "

Chapter II.

History and Antiquities.

The Sikhs.

In the decay of the empire under Aurangzeb and his successors the local tribes waxed more and more independent. They submitted in turn to Nádir Sháh, Ahmad Sháh, and Zamán Sháh, who long maintained a governor and garrison in Rhotás. But meanwhile the power of the Sikhs was steadily advancing. In 1765 they utterly defeated the Ghakars at Gujrát. Shortly afterwards they were invited across the Jhelam by the Gujar *chaudris* of Kálá. Their after progress need not be detailed. The whole district was overcome piecemeal; but its subjugation was not finally effected till the time of Ranjít Singh, who personally besieged and captured several of the Janjúa forts in the East Salt Range. The extinction of tribal independence is little to be regretted. The Sikhs were not pattern rulers, but they introduced a rude and imperfect order. Previous to their advent, if we may trust uncontradicted tradition, the whole district was the scene of one perpetual but petty warfare. Tribe fought with tribe, chief with chief, and village with village. Society lived in a sort of trustless truce broken from time to time by treacherous murders and thievish forays. In some villages the high places are still shown, where watchers were always stationed to beat the alarm drum on the approach of an enemy. The Sikhs did not, and probably could not, put a complete end to these disorders; but they cut short their boundaries and lessened their violence. They were themselves careless of everything that touched not their authority or their revenue, but they kept society together, and prevented anarchy. It would be tedious—were it possible—to give an account of the Kárdárs and Sirdárs who succeeded one another with great rapidity in various parts of the district. Those best remembered are Guláb Singh of Jamu, who ruled the Ghakars, and farmed the salt mines at Kheura; Chatr Singh, who was strong in the Jhelam Pabbi and in the Lundi Patti of Chakwál; Uttam Singh, well known in the Baráli hills and near Dúman; and the Cháchi Sirdár and Dhana Singh, who grew great in the west. In 1849 almost the whole district joined the standard of Chatr Singh in the second Sikh war. They fought bravely at Chilianwála and Gujrát, and afterwards experienced the punishment of rebellion at the hands of Major Nicholson, and the other officers who made the first Summary Settlement.

The Mutiny.

The following account of the events of 1857 is taken from the Panjáb Mutiny Report :—Mr. Thornton, Commissioner of the Jhelam division, had to contend with the difficulties created by the proximity of the independent kingdom of Kashmír, by the number of restless tribes whose home is in our own territory, and by the mountainous nature of the country. The division was not so strategically important as the Cis-Satlaj States, nor was it politically so valuable as the Pesháwar or Lahore division ; but to preserve peace in it and contentment among its inhabitants was imperative, owing to the large number of warlike tribes who find their dwelling in its valleys, hills and plains. This object was happily accomplished by the entertainment in British service of many of their martial spirits, who chafed at inaction, and would probably have fretted us had not a

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The Mutiny.

legitimate object been given them whereon to spend their strength; upwards of 1,000 horse were raised from one tribe alone, the Tiwanas, in the Shahpur district. Mr. Ouseley, the Deputy Commissioner, describes his relief at their departure as great.

The alarm at Jhelam was considerable, as there was no European force to restrain the native battery of artillery and the two regiments (14th and 39th Native Infantry). The 39th were ordered to march, without their magazines, towards Sháhpur for orders. Their destination was Dera Ismail Khán, but it was an object to avoid any resistance which might have broken out at Jhelam by keeping them ignorant of their future station. They were sent down the left bank of the Jhelam, and reached Dera Ismail Khán without giving trouble. The native artillery was ordered to Lahore, and there afterwards disarmed. The only regiment which remained was the 14th Native Infantry. The Chief Commissioner resolved to disarm it notwithstanding the Commanding Officer's assurances of its loyalty. Two companies were ordered to Ráwalpindi on pretence of forming a treasure party, but in truth to weaken the regiment. This move left but 500 men at Jhelam. Early on the morning of the 7th July a force of Europeans and guns which had been sent rapidly down from Ráwalpindi moved towards the parade ground of the 14th. It was joined on its way by the Sikhs of the 14th. The sepoys, seeing the advancing column at a distance, began firing on their officers, broke, fled to their lines, and there defended themselves against our force till 1 P.M. By that time they were dislodged, and fled to a neighbouring village. This battle had, however, cost the lives of many of our Europeans. Colonel Ellice, commanding the detachment of Her Majesty's 24th, was dangerously wounded, and Captain Spring was killed. The heat of the July sun told terribly upon the English troops. The three guns (6-pounders) proved useless against mud walls and the fortified guard-room of the 14th, and when after desperate fighting the lines were cleared of mutineers, the troops were too exhausted from heat, toil and want of food to follow up their advantage. At 4 P.M. Colonel Gerrard, who had assumed command after Colonel Ellice's fall, ordered an attack on the village to which the sepoys had retreated. The street fighting proved disastrous to our men; the guns were brought up too close to the houses, the gunners and horses were mowed down by the fire of the mutineers, ammunition on our side ran short, and a retreat was sounded. Two guns were brought off the field; the third, after a most gallant defence of it by Lieutenant Battye, Assistant Commissioner, in command of 30 police horse, and two or three other ineffectual attempts to rescue it, was captured by the mutineers and used against us. Both sides bivouacked on the field. Early in the morning it was found that the enemy had fled. The forethought displayed by Major Browne, Deputy Commissioner, in removing the magazine of the 14th from their lines before the second action, probably contributed much to their speedy flight, as it deprived them of any further supply of ball cartridge. The main body of the fugitives crossed into the Kashmír territory, and were subsequently surrendered by the authorities to our Government. Many stragglers were seized by the police, some were drowned, and 144 were killed in the fight. Only about 40 men of the whole 500 who

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The Mutiny.

opposed us remained at large. The usual precautions were taken in this district to guard against any ill-feeling amongst the people. Ferries were closed, letters opened, vagrants examined, doubtful or unemployed Hindustanis expelled, &c., &c. A plot which was laid by a Hindustani underling to murder the tahsíldar at Chakwál and to seize the treasure was found out and disconcerted. When a part of the 9th Irregular Cavalry mutinied at Mianwáli the police of Jhelam were aroused to try and cut them off. One man was seized and executed; the rest were disposed of elsewhere. A levy which was raised at Jhelam continued to keep the country quiet by giving employment to the spare hands. A telegraph-office was set up, and a line of direct postal communication organised, with the Deputy Commissioners of all adjoining districts, and with Mr. Harding, Assistant Commissioner, who had charge of the sub-division of Pind Dádan Khán. In the Regular Settlement of Mr. Brandreth the leading men received certain rewards for their loyalty. The subsequent history of the district is more social than political. The quiet routine of ordinary administration has never been interrupted.

Famines.

There has been no famine in Jhelam since 1860-61. In that year even, though the scarcity in the lower Panjáb and Hindustán caused wheat to rise to eight seers per rupee, the crops here did not fail to any serious extent. The high prices caused a good deal of distress among the poorer non-agricultural classes; but not among the agriculturists, as their crops had not failed. Of famines prior to our rule the district has had the same share as the rest of the Northern Panjáb, *viz.* :—

1st.—A three years' famine ending with the year A.D. 1783 (Sambat 1840) commonly known as the *cháliswan*; when wells and springs dried up and wheat could not be had for three *sérs* the rupee; and the mortality among the people and cattle was unprecedented.

2nd.—Three years' bad harvests ending June 1813, when wheat sold at seven *sérs*; but in severity not equal to the previous one.

3rd.—A two years' complete failure of crops ending September 1834; wheat rose to 14 *sérs*, and the distress and mortality were very great, The year 1833 A.D. (Sambat 1890) is commonly known as the *markan* year; a plant of that name sprung up spontaneously everywhere in great abundance as soon as the first rain fell, and afforded great relief both to cattle and to human beings.

The people say, and perhaps truly, that the failure of a *kharíf* crop does not make famine; and that the failure of a *rabí* crop does.

Locusts.

The last time the district suffered materially from locusts was in A.D. 1848. (Sambat 1905), the year of the Sikh war, when they caused great damage in the Pind Dádan Khán tahsíl and western portion of the district.

Development since annexation.

Some conception of the development of the district since it came into our hands may be gathered from Table No. II, which gives some of the leading statistics for five-yearly periods, so far as they are avail-

Chapter II.

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able; while most of the other tables appended to this work give comparative figures for the last few years. In the case of Table No. II it is probable that the figures are not always strictly comparable, their basis not being the same in all cases from one period to another. But the figures may be accepted as showing in general terms the nature and extent of the advance made.

Changes of area and boundaries.

The district of Jhelam was constituted on 23rd March 1849, Pind Dádan Khán being selected as the head-quarters, no fixed boundaries having then been determined for the district. The tahsíls then in existence were Pind Dádan Khán, Chakwál, Talagang and Jabbi, but during the year 1849 Rohtás, then a tahsíl, was transferred to this district from Ráwalpindi and also Jhelam which was a village at the time. In 1850 the tahsíl at Jabbi was abolished with the transfer of the *ilákas* of Makhud and Pindi-Gheb to the Ráwalpindi district, the remaining *ilákas* being added to Talagang tahsíl, and Jhelam was then constituted a tahsíl in place of Jabbi. The head-quarters of the district were also transferred from Pind Dádan Khán to Jhelam in 1850, reducing Pind Dádan Khán to a sub-division and a tahsíl. *Iláka* Pabbi was transferred from Ráwalpindi district to Jhelam in 1851, and three villages, Nílí, Thathi and Nathate, were added to the Jhelam tahsíl and excluded from Pind Dádan Khán tahsíl. In 1857 65 villages of Pind Dádan Khán and Talagang were excluded from Jhelam and added to the Shahpur district, of which 20 villages were again added to Jhelam district in 1863. The Jhelam district is now bounded as follows:—On the north-east by the Jammú territory of the Maharaja of Kashmír; north-west by the Ráwalpindi district; south-east by the Gujrát district; south-west the outskirts of Bannú district.

List of District Officers.

The following is a list of the Deputy Commissioners who have held charge of the district since annexation:—

Name	From.	To
Mr. H. Cox	23rd March 1849 ...	5th July 1849.
Captain G. W. Hamilton ...	6th July 1849 ...	9th October 1849.
Mr. L. Bowring	10th October 1849 ...	27th November 1851.
Major G. Brown	28th November 1851 ...	22nd February 1855.
Major J. H. Prinsep	23rd February 1855 ...	30th September 1855.
Colonel Taylor	1st October 1855 ...	30th August 1856.
Mr. B. Harding	1st September 1856 ...	30th April 1857.
Major G. Brown	1st May 1857 ...	30th September 1857.
Mr. Macnabb	1st October 1857 ...	14th September 1858.
Major Reed	15th September 1858 ...	30th April 1859.
Colonel J. W. Bristow	1st May 1859 ...	19th April 1870.
Captain E. P. Gurdon	20th April 1870 ...	23rd May 1870.
Captain W. G. H. Johnstone ...	24th May 1870 ...	22nd February 1871.
Mr. W. E. Blyth	23rd February 1871 ...	4th March 1873.
Colonel J. B. Smyly	5th March 1873 ...	3rd March 1876.
Colonel T. W. Mercer	4th March 1876 ...	30th March 1877.
Major E. G. Wace	1st April 1877 ...	11th June 1877
Captain J. B. Hutchinson ...	12th June 1877 ...	10th September 1877.
Major E. G. Wace	11th September 1877 ...	19th May 1878.
Captain J. B. Hutchinson ...	20th May 1878 ...	30th June 1878.
Ditto	1st July 1878 ..	10th July 1878.
Major E. G. Wace	11th July 1878 ...	30th September 1878.
Captain J. B. Hutchinson ...	1st October 1878 ...	21st December 1878.
Mr. C. R. Hawkins	1st January 1879 ..	30th January 1879.
Mr. T. W. Smyth	1st February 1879 ..	9th May 1879.
Mr. F. P. Beachcroft	10th May 1879 ...	30th September 1879.
Captain J. B. Hutchinson ...	1st October 1879 ...	2nd December 1879.
Colonel J. B. Parsons	2nd December 1879 ...	....

CHAPTER III.

THE PEOPLE.

SECTION A.—STATISTICAL.

Chapter III, A.

Statistical.

Distribution of population.

Table No. V gives separate statistics for each tahsíl and for the whole district, of the distribution of population over towns and villages, over area and among houses and families, while the number of houses in each town is shown in Table No. XLIII. The statistics for the district as a whole give the following figures. Further information will be found in Chapter II of the Census Report of 1881:—

Percentage of total population who live in villages ...		Persons ...	89·63
		Males ...	88·55
		Females...	90·86
Average rural population per village ...		...	556
Average total population per village and town ...		...	616
Number of villages per 100 square miles...		...	24
Average distance from village to village, in miles ...		...	219
Density of population per square mile of ...	Total area ...	Total population	151
		Rural population	135
	Cultivated area	Total population	442
		Rural population	396
	Culturable area	Total population	354
		Rural population	317
Number of resident families per occupied house ...		Villages	1·82
		Towns	1·88
Number of persons per occupied house ...		Villages	8·25
		Towns	7·61
Number of persons per resident family ...		Villages	4·53
		Towns	4·04

The Settlement Census of 1875-76 gave 122,661 houses for the whole district, or 4·25 persons to each house, and 125 houses to a village; but an enumeration of Indian "houses" is capable of indefinite variation, according as enclosures, buildings, or hearths are taken as the unit; the Settlement figures apparently refer to the last, which in the Census of 1881 were reckoned as "families." So too it must be remembered that the "village" of the Census Tables is the administrative *mauzah*, which often includes an enormous area and numerous small hamlets. Thus the villages of Lehri and Padhri include 40 hamlets each, and 15 to 20 is not uncommon; while the "village" of Láwa has an area of 135 square miles, and that of Thoha Mehrám Khán of 86 square miles. These villages are described in the next section of this chapter (page 54).

Chapter III, A.

Statistical.

Migration and birth-place of population.

Table No. VI shows the principal districts and states with which the district has exchanged population, the number of migrants in each direction, and the distribution of immigrants by tahsils. Further details will be found in Table XI, and in Supplementary Tables C to H of the Census Report for 1881, while the whole subject is discussed at length in Part II of Chapter III of the same report. The total gain and loss to the district by migration is shown in the margin. The total number of residents born out of the district is 47,518, of whom 30,057 are males and 17,461 females. The number of people born in the district and living in other parts of the Panjáb is 30,481, of whom 18,370 are males and 12,111 females. The figures below show the general distribution of the population by birth-place :—

Proportion per mille of total population.		
	Gain.	Loss.
Persons ...	81	52
Males ...	96	59
Females ...	63	44

Born in	Proportion per mille of Resident Population.								
	Rural Population.			*Urban Population.*			*Total Population.*		
	Males	Females.	Persons.	Males.	Females	Persons.	Males.	Females	Persons
The district	941	954	949	605	752	664	905	936	939
The province	992	995	993	889	915	898	979	988	984
India	999	1,000	999	996	998	995	998	1,000	999
Asia	1,000	1,000	1,000	1,000	998	998	1,000	1,000	1,000

The following remarks on the migration to and from Jhelam are taken from the Census Report :—

"I have already alluded to the extraordinary demand for labour which work on the Panjáb Northern State Railway and the transport arrangements in connection with the Kábul Campaign had created at the time of the Census. The fact is that, apart from the actual work in progress at the time of the Census, the construction of the Railway and the temporary fixing of its terminus, workshops, and head-quarters at Jhelam had attracted an enormous foreign population, the number of souls in the town of Jhelam itself having risen from 5,148 in 1868 to 11,319 in 1878, and to 16,634 in 1881. The large proportion of males among the immigrants shows how generally temporary the immigration is, and how never reciprocal. The figures for emigration are curious. I have already pointed out that the trans-Jhelam tract is hardly a part of India; and its people are so distinct in habits and race from the people of the plains that they decline to settle among the latter. Practically the only emigration across the Jhelam is into the neighbouring district of Gujrát, the people of which are somewhat akin to those of Jhelam. It is in great part reciprocal. Moreover, Jhelam includes the cis-Salt Range valley of the right bank of the Jhelam, to which, of course, the remarks made concerning the trans-Salt Range tract do not apply. The immigration from Kashmír is largely due to the late famine, though there are a good many Kashmíris permanently resident in the district."

The boundaries of the district changed somewhat between 1885 and 1868, owing to transfer of territory; but on the whole the gain and loss were about equal. Since 1868 and 1881, the district remained unchanged.

Chapter III, A.

Statistical.

Increase and decrease of population.

The figures in the statement below show the population of the district as it stood at the three enumerations of 1855, 1868, and 1881:—

	Census.		Persons	Males.	Females.	Density per square mile.
Actuals ...	1855 ...	...	429,420	...	...	108
	1868 ..	...	500,988	264,690	236 298	128
	1881 ..	...	589,373	313,448	275,925	151
Percentages	1868 on 1855	...	116 66	...	...	117
	1881 on 1868	...	117·64	118,42	116·77	118

It will be seen that the annual increase of population per 10,000 since 1868 has been 131 for males, 120 for females, and 126 for persons, at which rate the male population would be doubled in 53·3 years, the female in 58·1 years, and the total population in 55·5 years. Supposing the same rate of increase to hold good for the next ten years, the population for each year would be in hundreds as shown in the margin.

Year.		Persons	Males.	Females.
1881	...	589,4	313,4	275,9
1882	...	596,8	317,6	279,2
1883	...	604,3	321,7	282,6
1884	..	611,9	325,9	286,0
1885	...	619,6	330,2	289,4
1886	...	627,4	334,5	292,9
1887	...	635,3	338,9	296,4
1888	...	643,3	343,3	300,0
1889	...	651,4	347,8	303,5
1890	...	659,5	352,4	307,2
1891	...	667,8	357,0	310,2

But it is improbable that the rate of increase will be sustained. Part of the increase is probably due to increased accuracy of enumeration at each successive enumeration, while a much larger part is due to gain by migration, as already shown on pages 49, 50, the activity on the new railway works and the large transport camp at Jhelam having attracted an unusual number of immigrants to the district at the time of the last Census.

The increase in urban population since 1868 has been far greater than that in rural population, the numbers living in 1881, for every 100 living in 1868, being 127 for urban and 118 for total population. This is due to the extraordinary increase in the population of the town of Jhelam itself, which is discussed in Chapter VI. The populations of individual towns at the respective enumerations are shown under their several headings in Chapter VI. Within the district the increase of population since 1868, for the various tahsíls is shown in the margin. A Settlement Census of the *resident* population of the district, taken in 1875-76, gave the following figures :—Jhelam 150,472; Pind Dádan Khán, 151,096; Chakwál, 143,169; Talagang, 78,103. Total males, 277,635; females, 245,205; persons, 522,840.

Tahsíl.		Total population.		Percentage of population of 1881 on that of 1868
		1868	1881.	
Jhelam	...	142.520	174,169	122
Pind Dadan	...	144,104	166,186	115
Chakwal	...	136,181	154,144	113
Talagang	...	78,183	94,874	121
Total	...	500,988	589.373	118

Chapter III, A.

Statistical.

Births and deaths.

Table No. XI shows the total number of births and deaths registered in the district for the five years from 1877 to 1881, and the births for 1880 and 1881, the only two years during which births have been recorded in rural districts. The distribution of the total deaths and of the deaths from fever for these five years over the twelve months of the year is shown in Tables Nos. XIA and XIB. The annual birth-rates per mille, calculated on the population of 1868, are shown in the margin.

	1880	1881
Males ...	17	21
Females ...	15	18
Persons ...	32	39

The figures below show the annual death-rates per mille since 1868, calculated on the population of that year:—

	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	Average.
Males	18	27	31	29	29	23	19	22	19	20	29	45	29	24	26
Females	18	30	30	28	30	21	18	21	19	20	30	41	27	23	25
Persons	18	28	31	28	29	22	18	22	19	20	29	43	28	24	26

The registration is still imperfect, though it is yearly improving; but the figures always fall short of the facts, and the fluctuations probably correspond, allowing for a regular increase due to improved registration, fairly closely with the actual fluctuations in the births and deaths. The historical retrospect, which forms the first part of Chapter III of the Census Report of 1881, and specially the annual chronicle from 1849 to 1881, which will be found at page 56 of that report, throw some light on the fluctuations. Such further details as to birth and death-rates in individual towns as are available will be found in Table No. XLIV, and under the headings of the several towns in Chapter VI.

Age, sex, and civil condition.

The figures for age, sex, and civil condition are given in great detail in Tables IV to VII of the Census Report of 1881, while the numbers of the sexes for each religion will be found in Table No. VII appended to the present work. The age statistics must be taken subject to limitations which will be found fully discussed in Chapter VII of the Census Report. Their value rapidly diminishes as the numbers dealt with become smaller; and it is unnecessary here to give actual figures, or any statistics for tahsíls. The following figures show the distribution by age of every 10,000 of the population according to the Census figures:—

	0—1	1—2	2—3	3—4	4—5	0—5	5—10	10—15	15—20
Persons	321	197	290	334	355	1,497	1,506	1,041	801
Males	303	180	275	319	344	1,421	1,529	1,107	793
Females... ...	342	215	306	350	367	1,480	1,480	966	810

	20—25	25—30	30—35	35—40	40—45	45—50	50—55	55—60	over 60
Persons	785	811	801	518	565	348	438	199	690
Males	771	795	812	523	552	345	444	204	703
Females... ...	801	828	790	514	579	350	432	194	674

Chapter III, A.

Statistical.

Age, sex, and civil condition.

Population.		Villages.	Towns.	Total.
All religions	1855	......	......	5,265
	1868	......	......	5,284
	1881	5,254	5,875	5,318
Hindus ...	1881	5,300	5,969	5,514
Sikhs ...	1881	5,471	6,842	5,870
Musalmans	1881	5,246	5,740	5,283

The number of males among every 10,000 of both sexes is shown in the margin. The increase at the enumeration of 1881 is due to the extraordinary number of coolies and transport establishment collected in the district at the time. In the Census of 1881, the number of females per 1,000 males in the earlier years of life was found to be as shown in the margin. The figures for civil condition are given in Table No. X, which shows the actual number of single, married, and widowed for each sex in each religion, and also the distribution by civil condition of the total number of each sex in each age-period.

Year of life.	All religions.	Hindus	Musalmans.
0—1	995	895	1,009
1—2	1,049	960	1,056
2—3	980	1,064	973
3—4	966		
4—5	938		

Infirmities.

Table No. XII shows the number of insane, blind, deaf-mutes, and lepers in the district in each religion. The proportions per 10,000 of either sex for each of these infirmities are shown in the margin. Tables XIV to XVII of the Census Report for 1881 give further details of the age and religion of the infirm. The general health of the district has already been discussed at page 15.

Infirmity.	Males.	Females.
Insane ...	7	5
Blind ...	33	38
Deaf and dumb ..	12	8
Leprous ...	5	2

European and Eurasian population.

The figures given below show the composition of the Christian population, and the respective numbers who returned their birthplace and their language as European. They are taken from Tables IIIA, IX, and XI of the Census Report for 1881:—

Details.		Males.	Females.	Persons.
Races of Christian population ...	Europeans and Americans ...	199	108	307
	Eurasians	27	34	61
	Native Christians	31	17	48
	Total Christians	257	159	416
Language ...	English	221	126	347
	Other European languages ...	...	...	...
	Total European languages ...	221	126	347
Birthplace ...	British Isles	86	36	122
	Other European countries ...	3	1	4
	Total European countries ...	89	37	126

But the figures for the races of Christians, which are discussed in Part VII of Chapter IV of the Census Report, are very untrustworthy; and it is certain that many who were really Eurasians returned themselves as Europeans. The figures for European birth-place are also incomplete, as many Europeans made entries, probably names of villages and the like, which, though they were almost certainly English, could not be identified, and were therefore classed

Chapter III, B.

Social and Religious Life.

European and Eurasian population.

as "doubtful and unspecified." The distribution of European and Eurasian Christians by tahsíls is shown in Table No. VII.

SECTION B.—SOCIAL AND RELIGIOUS LIFE.

Villages and hamlets.

The villages of the district are somewhat peculiar. Towards the east and centre of the district they are not usually very large; but most of them are divided into numerous separate hamlets called *dhoks* or *mohras*. These hamlets sometimes consist of a single house, often of five or six houses together, and sometimes they are really complete villages. The causes of this arrangement are probably two-fold. In the first place the surface of the district is excessively variable in quality. The best areas for farming are often small in extent, and at a great distance from one another. Naturally each man settled down beside his own particular plot. This tendency was intensified by the old political circumstances of the district. The fighting tribes did not as a rule cultivate themselves. They settled small bodies of tenants upon all the best parts of their properties, and lived upon the rentals received. These tenants were a miscellaneous body with few common interests. Their landlords protected them from external violence, and they were therefore as safe in small hamlets as in large villages. Thus it became usual for the main body of the landlord class to live in one large central *abádi* surrounded by a string of *dhoks* inhabited by rent-paying tenants. The number of *dhoks* in a village is sometimes very great. Lehri and Padhri have each about forty, and fifteen to twenty is not uncommon. In process of time many *dhoks* have waxed mightily, and many of the old tenants have become owners. In such cases the want of communal feeling becomes at once apparent. Each *dhok* wishes to set up for itself, and to become independent of its neighbours. At the old Regular Settlement independence was at first rather freely granted. It resulted in a number of petty and feeble villages, mostly in the Jhelam tahsíl. Afterwards Mr. Brandreth refused to allow separation except in special cases. In the majority of instances this is no doubt the wiser policy.

Villages in the west.

As we go westward this system of *dhoks* and *mohras* gradually dies away. Among the Awáns of Talagang it is uncommon. Although the villages are large, the *abádi* or *vasti* is single. Where *dhoks* are met with, they are fewer and less important than elsewhere. The size of the villages here is sometimes enormous. Láwa has an area of 135 square miles, and Thoha Mehrám Khán of 86. Kandwál in the Thal of tahsíl Pind Dádan Khán is inferior to these with only 27. Láwa and Thoha between them occupy nearly the whole breadth of the Talagang tahsíl. A homogeneous farming population, with a large share of democratical equality, not overridden by jágírdars, but torn asunder by frequent village wars, has probably given occasion for this state of matters.

The village houses are almost universally built of mud or sun-dried bricks, one storey high, and flat-roofed. Where stones are

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Houses.

abundant, they are often built up into the mud walls, in the rough, just as they are. Recently a few of the leading *chaudris* have built new *hawelis* of squared and dressed stone, and most of the new mosques in the wealthier villages are now so built. Most houses have a yard in front, which is commonly walled in, but sometimes only set round with a loose thorn hedge. This contains the feeding troughs for cattle. Inside, the houses are kept scrupulously clean. The walls are leeped and polished, or sometimes white-washed. Generally the pots and pans are arranged upon shelves or recesses. Most houses contain a store-bin for grain, which is of different shapes and has different names in different parts of the district. The furniture consists of the ordinary cooking utensils, a few *chárpáís* stools made of *kána*, spinning wheels for cotton, and a hand-mill for grinding. There will also probably be one or two *pittáras* or baskets to hold clothes in. Some of the more advanced *chaudris* have recently taken to the use of English glass and earthenware of a strong coarse kind. With these and other ornaments they sometimes prepare a gorgeous but tawdry *mahal*, though the rest of their dwelling may be mean enough. The prettiest things about the upper class of houses are the carved doorways, and the inlaid and painted ceilings of wood. Both are the work of common *tirkháns*, but they are often really artistic and beautiful.

Furniture.

Food.

The main staple of the food of the people is wheat. This is supplemented by *bájra;* and these two grains are alone supposed to be proper sustenance for men. Maize, rice, *moth*, and barley are all pleasant now and then for a change, but are only fit to nourish women, children and horses. Meals are taken twice a day, about 10 A.M. and at sunset. The morning meal consists of wheaten or other *chapátis* with some salt, some *lassi* or butter-milk, and perhaps a little *ghi* and pepper to add a flavor. The evening meal is much the same, with the addition of some kind of *dál* or any vegetables that can be procured. The richer classes vary this dietary by the occasional addition of some *halwa* or of a *pillau* of rice and flesh. Meat is eaten by those who can afford it, and milk is largely consumed at all times. Meals are cooked at home in the cold weather, and at the village *tandúr* by the *Máchi* in the hot. The *Máchi* receives a handful of flour per day per family, and his fuel is generally thorns, refuse, or *bájra* stalks. The men of the household eat first, and after them the women. In addition to the regular meals it is not uncommon to take a little parched gram or other light sustenance about two o'clock. This is called shortly the *lodha-wela*. Anything that remains over from the evening meal is eaten early next morning with *ghi* and butter-milk. This is called shortly the *chhá-wela*. If there is work in the fields it is carried there about 8 A.M., otherwise it is eaten at home immediately on getting up. The estimate of the consumption of food by the people, given in the margin, was fur-

Grain.	Agricultural.	Non-agricultural.
Wheat ...	600	775
Barley ...	40	...
Gram ..	40	...
Bajra ...	240	175
Pulses ..	130	100
Total. ...	1,050	1,050

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Social and Religious Life.

nished by the district authorities for the Famine Report of 1879, the figures showing the annual consumption in seers by a family consisting of two parents, two children, and an old person.

Clothing of men.

The clothing of the men varies slightly in different parts of the district. Everywhere a *pag* or *pagri* is worn, which generally grows bigger with the social importance of the wearer. A sheet of cotton stuff, which is always of country make, is wrapped round the loins and reaches down nearly to the ankle. This is called the *táhmad*, but in many cases—especially among those who have much official business—the *táhmad* gives place to *paijámas*; and in the Pabbi and Dhani *ilákas* the common wear is the wide and loose kind of *paijámas* called *sutan*. The upper surface of the body is clothed in a coat or *kurta*. This is worn tight and short in the Jhelam tahsíl, and also in east Pind Dádan Khán; but elsewhere it is loose, wide-sleeved, and reaches nearly to the knee. By many of the younger men—especially in the Thal and in parts of Talagang—the *kurta* is not worn at all, but everyone alike wraps himself in a cotton sheet or *chadar* arranged shawl-wise. This is the dress for the hot weather. In the cold season the *anga* is put on over the *kurta*. It is a sort of loose coat, wadded with cotton, and reaching nearly to the knee. In addition to this, in the east and south of the district, the *chadar* is replaced by the *dohar* or doubled sheet of stout cotton stuff. Elsewhere a woollen blanket called *loí* is used instead of the *dohar*. The *loí* is generally of coarse stuff. Rich people eschew it in favour of the *duláí*, which is really a light *razáí*. The shoes are of the common type; but among the hills they are often replaced by sandals called *kheri* or *chaplí*.

European stuffs.

The taste for European cloth has spread largely. The women think it shows off their beauty to advantage, and the village dandies have the same opinion about themselves. Everyone who can afford it has an English turban. The richer men have *kurtas* also of English cloth, but *táhmads, sutan* and *paijámas* are almost always of country stuff.

Clothing of women.

Near the river the women wear a skirt called *minjli*, but elsewhere the wide, loose trousers called *sutan* are in common use. In Chakwál especially these are made full of overlapping pleats, so that from 30 to 40 yards of stuff are often used for a single pair. *Sutan* are made of country stuff. *Kurtas* are worn universally. They hang loose over the band of the *sutan*. Over all, the *chadar* is arranged shawl-wise, and is also brought over the head like a hood. The same dress is worn throughout the year, but the material is changed with the season.

Hindu clothing.

The only difference among the Hindus is that the men use the *dhoti*, and the women nearly all dress their hair with a huge horn-like top-knot called *kīla* or *choti*.

Ornaments of men.

A silver seal-ring is the only ornament much used by men. Among boys ornaments are, however, sometimes worn till the age

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Ornaments of men.

of puberty—being discarded gradually with the advancing years. Anklets (*khangru* or *pánute*), wristlets (*kangana*), necklaces (*hansli*), and earrings (*murki* or *dur*) are all sometimes to be seen. The last of these are sometimes retained through life, but the whole practice of loading boys with jewellery is in decay. It has led to several murders which have frightened parents.

Ornaments of women.

The ornaments worn by women are limited only by the want of money to buy more. It would be tedious to give a complete list of these often barbarous trinkets. Among the most common are *chumkha* or earrings; *hár* or chain necklaces; *bhawatta* or armlets; *thilán* or frontlets; *gokharu* or bracelets; *hansli* or necklaces; other earrings called *wáli*, *nath bulák* and *longh*, which are all nose-rings, all very ugly, and all laid aside during widowhood; *arsi* or huge finger rings, set with looking glasses, with many others.

Occupations of women.

The real occupations in life of a woman begin with her marriage. When she finally goes to her husband's house, she is generally fed with fat things and excused from labour for the first year. But afterwards begins a round of drudgery, which only ends when there is no strength left to endure it. The first thing done on rising in the morning is to grind the corn for the day's food of the family. Then the milk is churned for butter. That done, water has to be fetched—always two *gharas* and sometimes five. Sometimes the well or water source is close by, and sometimes far away. Back from the well, the morning meal has to be cooked and carried to the husband wherever he may be in the fields. Back from the fields, she may eat her own breakfast by herself, and afterwards spin the cotton, darn the clothes and act as laundress. Then follows another round of grinding, and the preparation of *dál* or vegetables for the evening meal. Next, water has to be fetched a second time, and dinner cooked and served to the husband. Her own dinner, and a turn at the spinning wheel, finishes the day. In addition to all this women are burdened with the ordinary domestic cares of the family, and with several duties belonging to the farm. Most of the cotton-picking (*chunái*) is done by them. They watch the ripening crops, and they glean the fields at harvest. In the lower classes they carry manure to the fields, weed the crops, and make themselves generally useful. Most of them also repair the house-walls when injured after rain. Of course this description does not apply to women who live in *parda*. But of such there are not many in the district except in the houses of certain *chaudris* and Saiads.

Occupations of men.

Men on rising milk the kine, and then go off to the fields with their implements and bullocks. Here, with the interval of the morning meal, they usually continue at some sort of agricultural work till four in the evening. As the day draws to a close they cut grass for the cattle. On their return home they litter down and feed the bullocks, eat their own dinner, and go to bed. December and January are idle months. Leisure lasts then nearly all day. Children

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—
Social and Religious Life.
Occupations of men.
Divisions of time.

as they grow up are expected to help their parents in herding cattle, picking cotton and other light tasks.

The day is divided into *welás* or watches. The names for these watches differ slightly in different places. Those in most common use are given below, with the approximate corresponding time in English:—

Badi-wela ...	... =	Dawn to sunrise.
Chháh-wela ...	... =	Sunrise to about 10 A.M.
Roti-wela ...	... =	10 A.M. to noon.
Dopáhar ...	... =	Noon to about 2 P.M.
Dhalle huedin ...	... =	1 P.M. to 2 P.M.
Peski-wela ...	... =	2 to 3 P.M.
Lauhde-wela ...	... =	3 to 4 P.M.
Digar-wela ...	... =	4 to 6 P.M.
Nimásha ...	... =	Sunset and twilight.
Khau pia ...	... =	After dinner.
Khufta-wela ...	... =	About 3 P.M., time for going to sleep.
Adhi Rát ...	... =	Midnight.

Marriages.

Hindu marriages need not be noticed here. Among Muhammadans the only recognised restrictions upon marriage are those of the sacred law. Marriages between first cousins are frequent, and though, in practice, marriage as a rule takes place within the tribe, yet this is merely a matter of convenience. Instances of marriages out of the tribe are by no means rare. *Chaudris* and other wealthy men who are able to choose over a wider field frequently take a wife—especially a second wife—from the daughters of a strange people. The only social ordinance on the subject of marriage which is everywhere recognised, is that no man must give his daughter in marriage to a tribe which ranks below his own in social estimation. Ghakars, Janjúas, and Saiads are generally admitted to be better born than the other races in the district. But outside of these three tribes social rank is very much a matter of individual opinion. Saiads, as a rule, give their daughters only to Saiads. Most Ghakars and Janjúas are ready to marry their daughters into Saiad families, but some of the prouder *chaudris* would refuse to do so. Between themselves Ghakars and Janjúas intermarry on terms of equality, but the instances are rare, and it is doubtful whether the custom would be universally recognised. All that can be stated generally and absolutely, is that in every marriage the husband's family must be at least equal in social estimation to that of the wife, although not at all necessarily equal in wealth.

Betrothal.

In most cases marriage is preceded by betrothal (*nátah*). While a boy is still only a few years old his father looks about for a suitable damsel of like age. When he has found what he wants, he addresses the girl's father through the agency of the *mairási*, the barber, or of a kinsman. If the parties agree they come together on a set day in presence of the *mulla*, the *mairásis*, the barbers and other witnesses. Various ceremonies take place, of which the most important is the distribution of sugar to "sweeten the mouths" of the spectators. The *mulla* invokes a *khair dua* or blessing, and the boy's father presents to the girl's father an offering of clothes and money. Part

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Betrothal.

of the money is given in fees to the *mulla* and the *mairásis* and barbers. One rupee, called the *nisháni* or token, is always placed in the hand of the girl. The expense of a betrothal varies from Rs. 10 to Rs. 200 on the boy's side, and from Rs. 7 to Rs. 25 on the girl's. Formal marriage follows at puberty. On the application of the boy's father a meeting takes place, at which the date for the marriage is fixed. Some days before the date so fixed the ceremony called *máián* takes place at the houses both of the boy and of the girl. The girl is dressed in red *sálu* cloth, her hands are stained with *henna*, and the braids in which she has hitherto bound up her hair are loosened. She is made to distribute sugar and grain to the guests, who are always confined to her own people. After this, until the marriage takes place, the girl is carefully watched and guarded for fear the *djinns* may do her a mischief. Similar ceremonies go on at the same time in the boy's house, and are followed by a procession in which he is promenaded round the village till midnight, attended by *mairásis* with pipes and drums and women with loud singing. During this promenade the boy wears torn or dirty clothes and carries a sword or knife in his hand to protect himself, as it is said, against the *djinns*. From the time of these ceremonies until the *barát* the women in both houses keep up a nightly chanting and drumming. Three days before the *barát* starts the more intimate friends of the bridegroom arrive; the other invited guests drop in later. When all are assembled the boy's father gives a big feast—generally of rice and meat—which costs from Rs. 50 to Rs. 500. Then water is brought from the well with pomp and singing. The bridegroom is washed and clad in new garments. The old ones go to the barber. This bathing is called *ghirauli*. The bridegroom then takes his place at the receipt of custom, and the guests present their *tambol* offerings. When this is finished the boy is crowned with a chaplet *(sihra)*, and the *barát* starts off for the bride's house with the groom mounted on horseback, and protected, by a gaudy paper umbrella called *chatta* or *sir*, and always carried by a *dhobi*. As the procession starts the women sing a *khair dua*. Arrived at the village of the bride the *barát* is met in the gateway by the sweeper, who demands his fee to allow the procession to proceed. This is called *dhora*, and is usually about eight annas. As the *barát* advances along the village lanes it is abused by all the village women and beaten with *bájra* stalks and the like. This mock warfare is called *dharantar*. Arrived at or near the bride's house everyone sits down, and the barber of the girl's part puts sugar and milk into the bridegroom's mouth, for which he receives a fee of from Re. 1 to Rs. 5 *(lág)*. Then the bride's father gives a feast, which costs from Rs. 50 to Rs. 800. This is followed by the *bera ghori*, a ceremony performed by the barber's wife. It practically consists of making images in flour of the boy's relatives, and then extorting a fee by threatening to abuse them. Next succeeds a promenade of the bridegroom round the village attended by pipes and drums, and women and *mairásis* singing in antiphonal measures. This goes on till the *sargi* or four o'clock in the morning. Then the *barát* who have been sleeping

Ceremonies observed at marriages.

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Social and Religious Life.

Ceremonies observed at marriages.

are waked up, and five or six of the best of them, with the bridegroom and his father, enter the bride's house carrying trays of presents—cloths and jewellery. This is called the *warasuhi.* This completed, the father of the bride directs the *mulla* to read the *nikáh.* Upon this two witnesses are first sent to the girl to enquire to whom she will give authority to consent to her marriage on her behalf. This is a mere pretence, as the girl holds her tongue, and her relations answer for her that she gives the *wák* or power-of-attorney to so-and-so. The man in question is called, accepts his attorneyship, and proceeds to settle the dower with the bridegroom. This is first put at an extravagant rate and eventually beaten down to a reasonable one. The usual rate varies from Rs. 20 to Rs. 100 with one *muhar.* It is never paid, and the whole thing is merely a form. Then the *kázi* thrice asks the consent of the bridegroom and of the bride's agent, and then reads the proper *khutba,* and the ceremony is complete. Money is not paid for a bride among the better classes. Among the lower classes it sometimes is paid. After the marriage is over the bride is taken to her husband's house with ceremonies which need not be detailed. She remains there three or four days, and then returns to her father's house for about a month. After that she finally takes up her abode with her husband.

Family law.

The customs regulating the devolution of property and similar matters were investigated and recorded at the recent Settlement. The prevailing custom on leading points are noted below. Regarding these records, Mr. Thomson writes thus:—

"I think these tribal statements are generally accurate; but most customs in Jhelam are liable to local variations, which are not recorded. These documents therefore will be useful if they are used to suggest and guide enquiry into doubtful cases; but if they are allowed to supersede it, they will be positively pernicious. To give one example: The *riváj-náma* makes the *pagvand* rule of inheritance apply to the Ghakar tribe. This is true generally; but some families of Ghakars are almost certainly *chundavand.*"

Inheritance among sons.

The following remarks apply only to the Muhammadan population. If a father leaves sons, they all take equal shares in his inheritance; but occasionally by private arrangement the share of the eldest son is somewhat larger than the shares of the other sons. In some Ghakar families, too, the *chundavand* rule appears to be in force.* Among the Janjúas and the Ghakars there is a further modification of the general rule dependent on the caste of the wife. The children of the low caste mother do not share equally with the children of the high caste. Mr. Brandreth states that they get nothing at all among the Ghakars, and only a one-fourth share among the Janjúas; but Mr. Thomson is inclined to think that in both tribes they would be held entitled to *guzára*; and that the extent of this *guzára* would depend upon the circumstances of the family. Such sons, however, have generally no share in *taluqdári* dues, or Government *ináms.* As to what consitutes a low caste, Ghakars and Janjúas

* As to this see the case Hassa Khan, plaintiff, *versus* Faiz Baksh and two others, defendants, all Ghakars of Kalri in tahsil Jhelam. Civil Suit No. 127 of 1880, in Court of Judicial Assistant Commissioner, Jhelam.

Inheritance among sons.

would consider everybody low except themselves, the Saiads, and a few high families among the Khokhars. Saiads never give their daughters to strangers. Some Salowi and Makhiála Janjúas have intermarried with women of the family of the Khokhar Rájas of Pind Dádan Khán on a footing of equality. But as a rule a marriage with an ordinary Khokhar girl would probably be a misalliance. Similarly the young Ghakar lambardár of Sangohi has married a girl who is a Chakri Janjúa, and here too the parties are considered perfectly equal. It may be doubted whether the Ghakars and Janjúas would ever admit even the old Chaudri families of the Mair, Kasar, and Awán tribes to be on an equality with themselves, but the question is not likely to arise.

Special case.

Sometimes a father, during his lifetime, will keep one portion of his property for himself and parcel out the rest between his sons. In that case succession to the portion which remains is generally considered to depend upon the making of a contribution to the father's funeral expenses when he dies. All the sons have a right to contribute if they choose; but often the one son who remains with the father—as one son generally does—attempts to perform the funeral by himself, and so debar his brethren from the inheritance. But if this is complained of, and the others wish to share in the expense and the property, they have a right to do so.

Rights of the widow.

Where there are sons the widow does not generally inherit. If, however, the husband has parcelled out all his property to his sons during his lifetime, except one share, then the widow is often allowed to succeed to that share for life. In other cases the widow is entitled to maintenance from the sons born of herself, or in default of such, from her husband's other sons. Frequently, in order to save disputes, the sons set apart a small area as the widow's *guzára* land, and do not apportion this among themselves till her death. If there is no sons, the widow succeeds to her husband's property for life. She may not alienate absolutely except for one or two special causes. Temporary alienations, to terminate upon her death or marriage, have frequently been recognised by the Courts without prejudice to the heirs in reversion; but it is doubtful whether this is in accordance with local opinion, unless the alienations are made for some good reason. How far the consent of the reversioners is requisite to either kind of alienation is doubtful. All a widow's rights and title cease on her death or remarriage.

Rights of daughters.

Daughters never inherit land unless their father dies with no direct or collateral male heirs within any reasonable degree of kinship. Mr. Thomson has known collaterals in the seventh and eighth degree of the Civil Law reckoning, exclude a daughter. But it is doubtful how much further exclusion would be carried. Daughters have a claim on their father's heirs to be suitably married, and for maintenance till marriage. In one case, where there were considerable doubts whether these duties would be properly discharged by very distant and inimical collateral heirs, a plough of land was severed from the father's estate and given to the daughter, on the condition that she would arrange these matters for herself. This was done by

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administrative order, and was accepted by the parties without any civil litigation. The circumstances were special.

Adoption.

Adoptions properly so called are unknown. But the custom of *ghar-jawái*, mentioned below, amounts to a quasi-adoption.

Gifts: *Ghar-jawái*.

Theoretically the power of gift is said to be unlimited. But where there are sons the practice is very restricted. Occasionally a small gift of land may be made to a favourite daughter; or, in partitioning his property among his sons during his lifetime, a father may give one a little more than another, but there is a strong opinion against anything more than this. When there are no sons, a father will sometimes take his daughter's husband into his house and practically adopt him. This is the *ghar-jawái* custom. If, however, he wishes to give his property to the son-in-law, he must state his intention publicly, and put the donee in possession, otherwise the property will not pass. A deed of gift is usual, but not absolutely necessary. After the death of the father-in-law his widow has no power of gift; and unless the transfer has been made previously in the manner indicated above, the collaterals are entitled to inherit upon the widow's death.

Wills.

Wills are little used and always disputed. Informal bequests of small matters are frequent and are generally acted upon.

Marriage and divorce.

Marriage and divorce are regulated by Muhammadan law. The only custom on the subject is that daughters must not be given in marriage to tribes of inferior social estimation. As to divorce it has been stated that there is a growing tendency in some places to trade in divorces. A woman who has got an order of maintenance against her husband, and who wishes to marry somebody else, harasses the husband with a dribble of legal proceedings till she induces him to sell a divorce to the paramour for a substantial consideration.

Special schemes of inheritance in certain leading families.

A good many of the leading men have special family schemes of inheritance, which are all so framed as to give the eldest son a larger share than he otherwise would get. There are instances of this at Dárápur, Vatli, Baghanwála, Rupwál, Talagang, Taman and elsewhere. These special rules of inheritance are commonly known as *haqq sirdári*, or *haqq tika*, and for the most part consist in giving to the eldest son in each generation a certain share of the inheritance in respect of his position as head of the family, and then dividing the remainder under the ordinary rules.

Religion.

In religion the great mass of the people are Muhammadans of the orthodox *Sunni-Hanifa* persuasion. There are a few scattered Shias, and a good many Wahâbis at Jhelam city. The people are thoroughly convinced of the truth of their own creed, but they are by no means intolerant or fanatical. They are fairly attentive to the outward ritual of religion. They say their prayers, fast in the *Ramzán*, and sacrifice at the *Id-ul-kurbán*. Religion, however, has but little practical iufluence as a regulator of conduct. The social sanction is in this respect infinitely more powerful. *Pírs* or spiritual directors are very common in the district, specially towards the West. Superstition is rife. Stones taken from the tombs of *fakírs* are an excellent cure for rheumatism; and living *fakírs* drive a brisk trade

Pírs.

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Social and Religious Life.

Pírs.

in charms and amulets to serve all sorts of purposes. There is a spring in the Phapra *iláka* where barren women can become fruitful; and another near Sháh Mahmúdwáli which was miraculously revealed to a pious boy who was too good to live long afterwards. Pilgrims visit this from as far away as Kohát. Miracles have not ceased here as yet. They can even be performed to order, as one *fakír* offered to perform one for Mr. Thomson's especial benefit. Legends about saints and *fakírs* are numerous, but generally of the most commonplace and uninteresting character. One connected with the shrine above Kallar Kahár, is, however, rather striking. Long ago a *fakír* came from the south country, and, when he had reached the Thal, a black deer met him and followed him. So they two journeyed on together, and came to the hill which is above Kallar Kahár. And after many days the *fakír* died there, and the black deer, refusing to be comforted, lay down and died also. And ever afterwards, when the village cattle went browsing over the place of their burial, they fell sick and died. So the people avoided that place; for they said a *djinn* is there. But by-and-bye the saint of Makdúm Jehanea came that way, and to him they told their tale. And he going to the place, when he had prayed, said to the people that there is no *djinn*, but the body of a holy *fakír*. Then they gathered themselves together, and built a fair shrine to which many folk still resort; and the cattle grew fat and flourished, as they have never done since. This legend does not seem to be Muhammadan, and the *fakír* is called Saki Hau Bhau, which looks like a remnant of Buddhism.

Legend of the shrine at Kallar Kahár.

General statistics and distribution of religions.

Table No. VII shows the numbers in each tahsíl and in the whole district who follow each religion, as ascertained in the Census of 1881, and Table No. XLIII gives similar figures for towns. Tables III, IIIA, IIIB, of the report of that Census give further details on the subject. The distribution of every 10,000 of the population by religions is shown in the margin. The limitations subject to which these figures must be taken, and especially the rule followed in the classification of Hindus, are fully discussed in Part I, Chapter IV of the Census Report. The distribution of every 1,000 of the Musalman population by sect is shown in the margin. The sects of the Christian population are given in Table IIIA of the Census Report; but the figures are, for reasons explained in Part VII, Chapter IV of the Report, so very imperfect that it is not worth while to reproduce them here. Table No. IX shows the religion of the major castes and tribes of the district, and therefore the distribution by cast of the great majority of the followers of each religion. A brief description of the great

Religion.	Rural population	Urban population.	Total population.
Hindu ...	784	3,196	1,034
Sikh ...	150	533	190
Jain ...	...	9	1
Musalman ...	9,064	6,209	8,768
Christian ...	2	50	7

Sect.	Rural population.	Total population.
Sunis	989	989
Shiahs	10 3	10 5

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Social and Religious Life.
General statistics and distribution of religions.

religions of the Panjáb and of their principal sects will be found in Chapter IV of the Census Report. The religious practice and belief of the district present no special peculiarities; and it would be out of place to enter here into any disquisition on the general question.

The general distribution of religions by tahsíls can be gathered from the figures of Table No. VII, and regarding the population as a whole, no more detailed information as to locality is available. But the landowning classes as a whole, and almost all the village menials, are Muhammadans, the Hindu and Sikh religion being almost confined to the mercantile classes and their priests, and to Government troops and servants.

Fairs.

There are 33 known *melas* in the district. These are generally called fairs, but are really semi-religious gatherings. They are nearly all connected with shrines, and the principal features of the *mela* are the making of offerings to the shrine, and the distribution of food from the shrine *langar*. Most *melas* are unimportant. Five of the principal are noted below:—

Tahsil	Name of the Fair or *mela*.	Estimated attendance	REMARKS.
JHELAM.	Miána Mohra ...	4,000	In the Pabbi—on all the Thursdays of *Baisakh*—at the shrine of Sháh Sufaid, which is said to cure lepers. No traffic. *Kaudi* playing and quail-fighting.
	Garát	8,000	In the Government *rakh*. The people assemble during the months of *Asojchait* and *Baisakh* to drink the waters of a small medicinal spring which is purgative, and said to have been blessed by Sháh Osmán Gházi. As the water is scanty there is often a fight, and there is therefore a police guard. People come here from great distances.
	Tilla	600	A *mela* held in honour of the Tilla Jogi on *Sheoratr*. The old *jágír* attached to this shrine has been abolished since the present Mohant was accused of murdering his rival for the "*Gaddi*."
PIND DADAN KHAN.	Katás	10,000	At Katás—1st *Baisakh* and for four days after.
	Choya Saidan Sháh	10,000	At Choya Saidan Sháh from 25th *Chait* to 2nd *Baisakh*. Chiefly religious. No traffic. Katás is of course mainly for Hindus, and Choya Saidan Sháh for Musalmáns. The two places are about two miles apart. The attendance is sometimes greater than is here stated.

Of the remaining *melas* attached to shrines those at Dharábi in Chakwál, and Jabbi in Talagang, are the most noticeable.

Christian Mission.

In the beginning of 1874 the Rev. Mr. Swift, of the American United Presbyterian Mission that has its head-quarters in the Panjáb at Sialkot, founded a branch mission at Jhelam. Two years later he was succeeded by Rev. Mr. Scott, who is now in charge. Weekly service is held in a house built by the Mission, and the congregation consists of 25 members. The number of baptisms since the foundation of the Mission has been 39, for the most part from among Muhammadans. Bazaar preaching and village and zenána visitation are the means of proselytism used by the Mission.

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Christian Mission.

In 1876, a boys' school was opened by the Mission, and was carried on with some success till April 1883, when it was closed for lack of funds. The Mission also has six girls' schools under the superintendence of Miss Anderson, three of which are for Hindus, two for Musalmáns, and one for low caste people. The first of them was opened in 1877. These schools are now attended by 140 girls, of whom 70 are Hindu, 45 Musalmán, and 15 of low caste. The Government scheme of primary education is followed, with the addition of singing, sewing, and religious instruction.

Language.

Table No. VIII shows the numbers who speak each of the principal languages current in the district separately for each tahsíl and for the whole district. More detailed information will be found in Table IX of the Census Report for 1881, while in Chapter V of the same report the several languages are briefly discussed. The figures in the margin give the distribution of every 10,000 of the population by language, omitting small figures. The universal language of the people is Panjábi. The *chaudris* and the more intelligent lambardárs speak Urdu, but it hardly comes natural to them. The Panjábi itself differs considerably in different parts of the district. The differences are rather of pronunciation and intonation than of words or construction. Some words, however, there are which are rarely heard out of particular *ilákas*. In general the language may be said to grow broader and more rustic as we go west.

Language.	Proportion per 10,000 of population
Hindustani	55
Kashmíri	6
Panjábi	9,910
Pashtu	20
All Indian languages ...	9,994
Non-Indian languages ...	6

Education.

Table No. XIII gives statistics of education as ascertained at the Census of 1881, for each religion and for the total population of each tahsíl. The figures for female education are probably very imperfect indeed. The figures in the margin show the number educated among every 10,000 of each sex according to the Census Returns. Statistics regarding the attendance at Government and aided schools will be found in Table No. XXXVII.

	Education.	Rural population.	Total population.
Males.	Under instruction ...	116	146
	Can read and write ...	277	400
Females.	Under instruction ...	1·4	3·6
	Can read and write ...	2·5	5·1

The distribution of the scholars at these schools by religion, and the occupations of their fathers, as it stood in 1881-82, is shown in the margin.

Details.	Boys.	Girls.
Hindus	1,795	253
Musalmáns	1,860	60
Sikhs	301	142
Others	1	...
Children of agriculturists ...	2,164	180
" of non-agriculturists ...	1,793	275

The mission schools have just been described.

Character and disposition of the people.

The character and disposition of the people is thus described by Mr. Thomson :—

"The people, as a whole, are a fine population. They are physically strong, and well-developed, with a high spirit and frank manners. They are generally

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Character and disposition of the people.

very well-behaved. Crimes for the sake of plunder are comparatively rare. Crimes of violence are, however, unfortunately too common. They generally arise from quarrels connected with women or land, or ancient feuds. Chakwál and Talagang are the worst places in this respect, and there can be no doubt that the people there are more wayward and passionate than elsewhere. I do not think, however, that they are difficult to manage. I have found it the best plan to listen patiently to everything they had to say, whether relevant or not, but when once an order was issued to insist upon its being carried out immediately and without demur. The worst qualities of the people are envy, vindictiveness, and want of truth. The second of these vices leads to a strong pertinacity in prosecuting quarrels, whether by litigation or otherwise. Sometimes it takes the odious form of cattle-poisoning. Lying is so common that it brings no shame; when a man is discovered in a manifest falsehood, he considers it enough to say that he forgot himself. In lawsuits the only oath upon which much reliance can be placed is the oath of divorce. And I have known even that to fail. It should be remembered, however, that magistrates are always liable to overrate the amount of falsehood. On the other hand, the better races among the people are brave, self-respecting, honourable according to their own ideas, and loyal. They are not afraid to tell you a good deal of what they really think, which makes talking to them not only more pleasant but much more interesting."

Tables Nos. XL, XLI, and XLII give statistics of crime; while Table No. XXXV shows the consumption of liquors and narcotic stimulants.

Poverty or wealth of the people.

It is impossible to form any satisfactory estimate of the wealth of the commercial and industrial classes. The figures in the margin show the working of the income tax for the only three years for which details are available, and Table No. XXXIV gives statistics for the license tax for each year since its imposition. The distribution of licenses granted and fees collected in 1880-81 and 1881-82 between towns of over and villages of under 5,000 souls, is shown in the margin. But the numbers affected by these taxes are small. It may be said generally that a very large proportion of the artisans in the towns are extremely poor, while their fellows in the villages are scarcely less dependent upon the nature of the harvest than are the agriculturists themselves, their fees often taking the form of a fixed share of the produce, while even where this is not the case, the demand for their products necessarily varies with the prosperity of their customers. Perhaps the leather-workers should be excepted, as they derive considerable gains from the hides of the cattle which die in a year of drought. The circumstances of the agricultural classes are discussed in Chapter III, Section D.

Assessment.			1869-70	1870-71	1871-72
Class I.	Number taxed	...	2	1,240	321
	Amount of tax	...	330	24,152	2,719
Class II.	Number taxed	...	52	260	136
	Amount of tax	...	1,811	9,720	1,806
Class III.	Number taxed	...	167	168	54
	Amount of tax	...	3,110	6,552	1,734
Class IV.	Number taxed	...	781	53	......
	Amount of tax	...	8,612	2,862	......
Class V.	Number taxed	...	......	72	......
	Amount of tax	...	......	7,295	......
Total.	Number taxed	...	1,002	1,893	511
	Amount of tax	...	13,863	50,581	6,259

	1880-81.		1881-82.	
	Towns.	Villages.	Towns.	Villages.
Number of licenses ...	370	689	289	457
Amount of fees	7,655	8,045	4,935	6,665

SECTION C.—TRIBES AND CASTES AND LEADING FAMILIES.

Chapter III, C.

Tribes and Castes and Leading Families.

Statistics and local distribution of tribes and castes.

Table No. IX gives the figures for the principal castes and tribes of the district, as recorded at the Census of 1881, with details of sex and religion, while Table No. IXA shows the number of the less important castes. It would be out of place to attempt a description of each. Many of them are found all over the Panjáb, and most of them in many other districts, and their representatives in Jhelam are distinguished by no local peculiarities. Some of the leading tribes, and specially those who are important as landowners or by position and influence, are briefly noticed in the following sections; and each caste will be found described in Chapter VI of the Census Report for 1881.

The Census statistics of caste were not compiled for tahsíls, at least in their final form. It was found that an enormous number of mere clans or subdivisions had been returned as castes in the schedules, and the classification of these figures under the main heads shown in the caste tables was made for districts only. Thus no statistics showing the local distribution of the tribes and castes are available from the General Census, but the table at page 68 shows the figures of a Settlement enumeration of the *resident* population made in 1875-76, and the territory held by each of the dominant tribes is defined in the description of that tribe given in the following pages.

Tribal organization of the district.

It may have been gathered from the account given in Chapter II that the whole organization of the district is a tribal one. Except among the Hindus, who are not very numerous, and who are almost entirely devoted to trade, there are no castes or *gots* properly so called. All the more important tribes, and many of their sub-divisions also, occupy fairly defined areas, of which they are the sole or the predominant population. Each tribe claims to be descended from some one common ancestor, and the sub-divisions, which are often called *gots*, merely indicate the various collateral branches of agnatic descent. Women who marry out of their own sub-division or out of their own tribe cease to belong to it, and their children follow the tribe of the father. The tribes of the district are exceedingly numerous; but the only ones of which it is necessary to give any account here are the Ghakars, the Janjúas, the Khokhars, the Mairs, Kasars and Kahúts, and the Awáns.

Jats, Rájpúts and Moghals.

Before discussing them, however, it will be necessary to say a few words on the Jats and Rájpúts and Moghals of Jhelam. The principal sub-divisions of Jats and Rájpúts as returned at the Census of 1881 are given on page 69. It will be noticed that they include many tribes which are shown separately in the Settlement figures at page 68. And indeed the figures below do not represent the whole truth in this respect; thus 207 Bhagiál, 181 Pathál, 191 Kaniál, and 284 Langá, returned themselves as Rájpúts, and 313 Ahírs, 321 Tahíms, 256 Siáls, 290 Kahúts, and 232 Janjúas as Jats. The fact is that, as already stated, the real organisation of society, or at any rate of that portion of society who occupy a dominant position in the district, is based upon tribe rather than upon caste. Thus many of the tribes, when asked their caste at the

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
			DETAIL OF RESIDENT POPULATION BY RELIGIONS AND TRIBES. (SETTLEMENT CENSUS OF 1875-76.)																						
			HINDUS.					MUHAMMADANS.																	
Tahsils.	Population.	DETAIL OF STATUS.	Brahmins.	Khatris.	Others.	TOTAL.	Sikhs.	Saiads.	Ghakars.	Janjuas.	Jalaps.	Phaphras.	Mair and Minhas.	Kasars.	Kahuts.	Awans.	Gujars.	Bhattis.	Other Rajputs.	Jats.	Moghals.	Kamins.	Others.	TOTAL.	Other Religions.
JHELAM.	150,472	Owners ...	347	289	57	693	208	2,043	9,363	1,349	...	...	636	...	...	4,895	12,417	...	2,275	30,720	2,739	2,278	6,055	74,770	...
		Tenants ...	480	227	77	784	215	672	273	192	...	...	157	...	...	589	1,162	...	227	6,199	408	11,895	5,923	27,697	...
		Others ...	1,357	3,915	2,148	7,420	3,300	510	339	49	...	..	156	...	...	122	154	...	330	918	175	22,850	9,759	35,362	17
		TOTAL ...	2,184	4,431	2,282	8,897	3,729	3,225	9,975	1,590	...	...	949	...	...	5,606	13,733	...	2,832	37,837	3,322	36,923	21,737	137,829	17
PIND DADAN KHAN.	151,096	Owners ...	559	788	33	1,380	471	3,122	31	5,657	1,304	3,190	...	...	...	18,577	1,426	564	2,181	13,538	1,417	2,217	12,583	65,807	18
		Tenants ...	114	174	191	479	33	578	...	280	41	184	...	...	...	794	338	84	232	2,900	13	4,499	3,387	13,330	53
		Others ...	3,566	8,589	5,840	17,995	1,636	971	8	455	13	2	...	...	...	979	280	21	85	1,109	18	34,285	8,180	46,406	3,488
		TOTAL ...	4,239	9,551	6,064	19,854	2,140	4,671	39	6,392	1,358	3,376	...	...	...	20,350	2,044	669	2,498	17,547	1,448	41,001	24,150	125,543	3,559
CHAKWAL.	143,169	Owners ...	234	900	110	1,244	739	2,478	518	715	...	...	10,224	6,860	9,397	11,188	1,986	2,454	748	5,624	736	3,203	6,599	62,730	...
		Tenants ...	342	1,649	167	2,158	631	728	57	446	...	...	1,481	1,278	1,030	2,602	367	1,283	289	3,996	82	9,810	6,757	30,206	...
		Others ...	1,862	5,640	1,332	8,834	5,568	757	30	111	3	...	885	639	466	1,756	121	156	122	4,183	62	19,278	2,493	31,059	...
		TOTAL ...	2,438	8,189	1,609	12,236	6,938	3,963	605	1,272	3	...	12,590	8,774	10,893	15,546	2,474	3,893	1,159	13,803	880	32,291	15,849	123,995	...
TALAGANG.	78,103	Owners ...	77	408	74	559	26	1,039	...	411	...	...	130	...	...	29,765	23	3,200	28	...	209	429	957	36,191	...
		Tenants ...	46	194	72	312	8	203	20	...	...	...	6	7	...	8,797	...	169	102	...	272	4,252	4,068	17,896	230
		Others ...	377	4,832	1,240	6,449	520	247	...	...	...	...	17	..	...	610	...	41	27	...	11	10,617	1,899	13,469	2,443
		TOTAL ...	500	5,434	1,386	7,320	554	1,489	20	411	...	...	153	7	...	39,172	23	3,410	157	...	492	15,298	6,924	67,556	2,673
TOTAL DISTRICT.	522,840	Owners ...	1,217	2,385	274	3,876	1,444	8,682	9,912	8,132	1,304	3,190	1,099	6,860	9,397	64,425	15,852	6,218	5,232	49,882	5,101	8,127	26,194	239,498	18
		Tenants ...	982	2,244	507	3,733	887	2,181	350	918	41	184	1,644	1,285	1,030	12,782	1,867	1,536	850	13,095	775	30,456	20,135	89,129	283
		Others ...	7,162	22,976	10,560	40,698	11,030	2,485	377	615	16	2	1,058	636	466	3,467	555	218	564	6,210	266	87,030	22,331	126,296	5,948
		TOTAL ...	9,361	27,605	11,341	48,307	13,361	13,348	10,639	9,665	1,361	3,376	13,692	8,781	10,893	80,674	18,274	7,972	6,646	69,187	6,142	125,613	68,660	454,923	6,249

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Jats, Rájpúts and Moghals.

Census of 1881, returned themselves as Jat, Rájpút, Moghals, or what not, instead of, or rather as well as by the tribal name by which they are locally known. The figures of the Settlement enumeration are therefore far more useful and trustworthy for local purposes than are those of the General Census. Especially in the latter the number of Moghals is greatly over-stated, many of the minor tribes having returned themselves as Moghals who in reality have not the smallest claim to the title. So again the word Jat is locally applied very loosely to any low-born agriculturist of uncertain origin.

Sub-divisions of Rájpúts, Jhelam.

NAME.	NUMBER.	NAME.	NUMBER.
Bhatti ...	10,430	Siál ...	576
Panwár ...	646	Khokhar	2,208
Janjúa ...	9,964	Manhás ...	15,199
Chibh ...	614	Báráshâhi	1,233
Chauhán	1,594	Jálap ...	2,757
Ráthor ...	835		

Sub-divisions of Jats, Jhelam.

NAME.	NUMBER.	NAME.	NUMBER.
Awán ...	668	Bangiál ...	1,253
Bains ...	630	Tohtiál ...	1,845
Bhatti ...	6,241	Dhaniál ...	3,576
Bhutta ...	1,354	Khartal ...	1,448
Tárar ...	712	Kaniál ...	2,067
Chuán ...	3,989	Kaliál ...	2,708
Sáhi ...	576	Bhagiál ...	1,253
Gondal ...	6,354	Panwár ...	524
Khokhar	2,011	Damiál ...	3,680
Manhás ...	1,711	Dhúddi ...	733
Varaich ...	504	Ránjha ...	1,601
Chaddar ...	623	Kaniál ...	2,267
Ansári ...	1,128	Mekan ...	1,125

The Ghakars.

The chief seats of political power among the Ghakars have generally lain in the Ráwalpindi district. But their earliest known settlement in these parts seems to be at Ubriám, near Sultánpur, in tahsíl Jhelam. Their own traditions point to a Persian origin. After conquering Thibet and ruling Káshmír, they were expelled from the latter country, and took refuge with Máhmúd of Ghazni. That monarch took their leader, Ghakar Sháh, into great favour, and eventually settled him in those districts which the Ghakars still hold. It is always necessary to use these tribal traditions with caution. Pride of race is strong in these parts, and leads to the invention of some royal progenitor. Pride of religion is a perpetual inducement to escape from the admission of an idolatrous ancestry. In the present case the Ghakar traditions are certainly false. For nothing is better known in Indian history than the fact that the Ghakars were bitterly opposed to Máhmúd of Ghazni, and brought him nearly to destruction in a great battle hard by Pesháwar. As we have seen, General Cunningham concludes the Ghakars to be a Turanian race settled in these parts since the times of Darius Hystapes (*circa* B.C. 500), and identical both with the Abhisares found here by Alexander the Great, and with the "savage Gargars" mentioned by Dionysius, the geographer, in the 3rd century A.D. If this be so, the tribe has had the honour of furnishing a hero to one of the most amusing romances of Voltaire. But though the

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Turanian origin of the Ghakars is highly probable, yet the rest of the theory is merely a plausible surmise. On the whole there seems to be little use in going beyond the sober narrative of Ferishta, who represents the Ghakars as a brave and savage race, living mostly in the hills, with little or no religion, and much given to polyandry and infanticide.

They were converted to Islám by Sháháb-ud-dín Ghori. In this district, from Ubriám they first occupied Sultánpur and the Iskhandrál *iláka* which lies north of the Trunk Road between the Nílí and Lehri hills. Thence they spread over the south Khuddar country between Nílí and Tilla and along the other side of Tilla by the river near Sangohi. Some of their settlements even reached as far westward as the Lundi Patti of Chakwál. The Janjúas were constantly opposed to them, but were nearly always worsted. Once only Darwesh Khán, a fighting Janjúa chief, drove them backward as far as Dangalli. But there he was himself routed with great slaughter by Háti Khán of Pharwála. Háti was in his turn defeated by the Emperor Bábar, then employed on one of his early freebooting expeditions, and who had been gained over by the Janjúas to attack the Ghakars. But when Háti Khán was dead, Bábar on a subsequent expedition not only made friends with the Ghakars, but procured from them an auxiliary force. When Sher Sháh expelled Humáyún the two Ghakar "Sultáns," Adm Khán and Sárang Khán, adhered to the cause of the exile. To bridle their pride Sher Sháh built the huge fort of Rotás about nine miles from Jhelam. Around this waged a constant guerilla warfare. Thirteen of the twenty sons of Sultán Adm fell, and the Ghakar country was fearfully harried, but the tribe was never subdued. When Humáyún returned they began to grow great. Their subsequent history mostly concerns the Ráwalpindi district, where were the chief seats of the Admál and Sárangál. About 1740 Sultán Mukarrab Khán of the Admál rose to great power, and claimed to rule from Attock to the Chenáb. But meanwhile the Bugiál clan had gradually made themselves strong round Domeli in tahsíl Jhelam, and openly scoffed at these pretensions. At length Mukarrab Khán was utterly defeated by the Sikhs at Gujrát. The Bugiál at once rebelled, and Rájá Himmat Khán of Domeli seized Rotás, captured Mukarrab, and murdered him. The different clans then for the most part quarrelled among themselves, and all in turn fell an easy prey to the Sikhs.

Distribution and condition of the Ghakars.

The Jhelam Ghakars are nearly altogether confined to the Jhelam tahsíl. There they are the predominant race throughout the Khuddar Assessment Circle, that is, the upland between Tilla and Nílí, and all the villages on the bank of the river from and above Duliál. They also hold a good many villages on the south side of Tilla, in the plain country round about Jhelam and Sangohi. When it is said that the Ghakars hold these areas, it is not meant that they hold them exclusively. There are many villages where there are no Ghakar owners, and many more where the ownership is mixed. But there can be no doubt that they are the chief and leading race in these parts, to whom all the others look up, and from whom they take the ply. They all alike claim to descend from Ghakar Sháh, who has

The Admál. The Iskandrál. The Bugiál. The Firozál. The Tuliál. Mandis.

been already referred to. But they have split into many collateral branches, of which the most important in this district are the Admál, the Iskandrál, and the Bugiál. The Admál are the most honourable as being descended from Sultán Adam. But they hold little here except Sultánpur, and one or two villages in east Chakwál. The Iskandrál claim descent from Iskandr Khán. They occupy the tract between the hills, north of the Grand Trunk Road. They are comparatively numerous, but have never been very important. The Bugiál are the most stirring branch of the Jhelam Ghakars. They lie south of the Trunk Road from the Nílí hills to Tilla, and to some extent on the other side of Tilla also. A smaller clan named Firozál hold a few villages close to Jhelam, and a still smaller clan which is little esteemed—the Tuliál—has four or five estates on the bank of the river near Duliál and Beli Budhár. The chief seats or mother villages of each clan are generally called *Mandis*. Of these there are six now generally recognised in the Jhelam district—Sultánpur which is Admál; Lehri and Bakrála which are Iskandrál; Domeli, Baragowáh, and Padhri which are Bugiál. Bhet and Salhál, which were once flourishing *Mandis* of the Bugiál, are now decayed.

Character of the Ghakars.

Physically the Ghakars are not a large-limbed race, but they are compact, sinewy, and vigorous. They make capital soldiers, and it has been stated upon good authority that they are the best light cavalry in Upper India. They are often proud and self-respecting, and sometimes exceedingly well-mannered. As farmers they are not in the first class. But to many of them agriculture is comparatively a new business, and they will improve. Where their superiority is undisputed, they make fairly good landlords, but where their former tenants have opposed them successfully, they not seldom show some vindictiveness. They have no contempt for labour. Numerous Ghakars worked as common coolies on the railway works, but they prefer service in the Army or the Police. Race feeling is strong among them. Ghakars of the half-blood—especially in the more highly born families—are at more disadvantages as regards inheritance, shares in *ináms*, and the like, than is generally the case with other tribes. The chief Ghakar families are now found at Lehri, Domeli, Padhri, Pindori, and Adrána. The Sultánpur and Bakrála Ghakars, though highly respectable, have fallen into comparatively poor circumstances.

The Janjúas.

The Janjúas are the only important tribe in the district who are undoubtedly of Rájpút origin. They are of the Lunar Race; but whence and when they came to the Panjáb is a matter of great doubt. Their own traditions point to recent immigration. As has been pointed out by Mr. Lepel Griffin, the genealogical trees of the various villages are very short, but too much stress should not be laid on this. The *mairásis* commonly omit unimportant generations all over the district. It is clear that such omissions have been made in the present case. For these short pedigrees of five and twenty generations at the utmost are supposed to span the entire interval from Máhmúd of Ghazni to the present day. General Cunningham

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The Janjúas.

thinks that the Janjúas must have been settled here for nearly three thousand years. He derives them from Anu, the brother of Yádu. So great an antiquity of settlement is improbable, and is supported by little real proof. That King Porus who fought with Alexander was a Rájpút of the Paurava clan may be admitted. But there is nothing to show that the Rájpúts had then penetrated to the north side of the Jhelam. Even if this were otherwise, there is no evidence to connect the then Rájpúts with the present Janjúas. It may be added that General Cunningham's argument leads him to class the Awáns as Rájpúts and cousins of the Janjúas, and to represent them also as residents of three thousand years standing. This is almost certainly erroneous.

Immigration and progress of the Janjúas.

At some uncertain period, then, some clans of Rahtor Rájpúts, emigrating from Jodhpur, occupied the uplands of the Salt Range. The leader of this movement, according to the common account, was Rájá Mal; but this chieftain is a little mythical, and any large action of doubtful origin is apt to be fathered upon him. The Rájpúts first seated themselves at Malot in the west Salt Range. This place, although picturesque, is so inaccessible and unfruitful, that it must have been chosen for safety more than convenience. From here the Rájpúts extended their supremacy over the uplands of Jhangar and Kahun, and the plain country near Girjákh aud Dárapur. In these regions they were rather settlers than conquerors. They not only ruled, but to a great extent occupied also. It seems very doubtful whether their real territories ever extended much further, but their traditions certainly point to a former lordship over the western upland of Vunhár, and over much of the present tahsíls of Talagang and Chakwál. To a certain extent these traditions are supported by a notice in the diary of the Emperor Bábar. But it seems probable that in these outlying territories the Janjúas were little more than garrisoned invaders. They had probably not much to do with the country except to levy tribute from it. If Bábar's account be read with attention, it will be seen that he represents the Janjúas as confined to the hills, and ruling over various subject tribes who cultivated the plains. This account serves to explain the utter extirpation that has befallen the Janjúas in the Vunhár and elsewhere. If we conceive them as holding detached forts in the midst of a foreign population which gradually grew hostile, then this extirpation can easily be understood. This also serves to explain how one or two villages of peasant Janjúas have escaped, while all the Chiefs and Rájás round about have perished. Thus the village of Dharábi remains to this day; but if the Awáns really expelled or extirpated a large Janjúa population from the country round Talagang, Dharábi would almost certainly have been destroyed. If, however, the Awáns merely waged war on the detached forts of petty freebooters, then the escape of Dharábi requires no explanation. The vague accounts of the people seem to point to some such history as this, and not to any great race or tribal war.

Extent and character of their dominion.

Their conversion to Islám.

The Janjúas were long the predominant race in the centre and west of the district. Rájá Mal is said to have reigned in the days of

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The Janjúas.

Máhmúd of Ghazni, and his authority was probably more or less recognised from Ráwalpindi to the Jhelam. When Máhmúd invaded India the Janjúas opposed him, were defeated, and fled to the jungles. Máhmúd followed them up, and succeeded in capturing Rájá Mal himself. The Rájá was released on condition that he and his tribe should embrace Islám. When this conversion took place, the *janju* or caste-thread was broken, and the neophytes have been called Janjúas ever since.

After history.

Rájá Mal is said to have left five sons. Three of these settled in Ráwalpindi or Hazárá. Two—Wír and Jodh—remained in Jhelam. They speedily divided their possessions. Wír took the west, and Jodh the eastern share. Choya Saidan Sháh was the boundary between them. Wír's descendants are now represented by the Janjúas of Malot and the Kahun *iláka*. Their chief seat is at Dilwál. Jodh's descendants have split into many branches. A general supremacy was long exercised by the Sultáns of Makhiálá in Jhangar. But the chiefs of Kusak and Bághanwála soon became practically independent, as did also those of Dilur, Karangli, and Girjákh, whose descendants are now either extinct or much decayed. The plain *iláka* of Dárapur and Chakri seems to have broken off from the main stock even earlier than the others. This passion for separatism is fatal to any large authority. The feuds to which it gave rise, joined with an endless Ghakar war, and the establishment of new and strenuous races beyond the mountains brought the Janjúa dominion to destruction. The Dhani country—called Maluki Dhan after the great Rájá—and the forts in Talagang and the Vunhár seem to have been all lost not long after the time of Bábar. But in the centre and east Salt Range and round Dárapur the Janjúa supremacy remained undisputed until the advent of the Sikhs. And the rich Salt Mines at Kheura and Makrách must have always made this territory important. The Sikhs conquered the whole country piecemeal. Ranjít Singh himself besieged and captured Makhiálá and Kusak. Most of the influential chiefs received *jágírs* but were ousted from their old properties.

Distribution of the Janjúas.

The Janjúas now hold many villages in the centre and east Salt Range, and in the plain country round Dárapur in the south-west Jhelam tahsíl. There are one or two detached Janjúa villages beyond the mountains—such as Dhrábi in Chakwál, and Kot Sárang in Talagang. The chief families are at Dilwál, Makhiálá, Bághanwála, Kusak, Dárapur, Chakri; and Kot Sárang. The Malot family is reputable but poor. Many chiefs hold considerable properties, and in addition are entitled to certain dues or talukdári rights. To several of them *jágírs* or *ináms* have also been granted.

Character.

The Janjúas are physically a well-looking race. Their hands and feet in particular are often much smaller and more finely shaped than those of their neighbours. They largely engage in military service, where they prefer the cavalry to the infantry. They are poor farmers, and bad men of business. They are careless of details, and apt to be passionate when opposed. Too often they fix their hopes on impossible objects. As landlords they are not exacting with submissive tenants. They are willing to sacrifice something to retain even the

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poor parodies of feudal respect which time has not destroyed. Their manners are often good. They have a large share of vanity which is generally rather amusing than offensive. They are at the same time self-respecting, and not without a certain kind of pride, and are eminently a people with whom slight interludes of emotional Government are likely to be useful. The even routine of our administration chafes them more than others.

The Gujars.

The Gujars call for little remark. They seem to have been long settled in this district, where they hold many of the best villages round Jhelam. They rose to brief importance when the Emperor Bahádar Sháh made the Gujar *chaudri* of Kálá governor of a *chaurási*. But the Janjúas and the Ghakars were always too strong for them. The *kálá chaudris* enjoy the distinction or the infamy of having been the first to invite the Sikhs across the river. As usual they were almost the first whom the invaders brought to ruin.

Divisions of the Gujars.

The Gujars are divided into many *gots* or clans. In this district the Paswál and the Kathána are perhaps best known. The *kálá chaudris* are Paswál, and intermarry only with the *chaudris* of Dhing in Gujrát. This is not a caste ordinance. It springs merely from the recollection of old fellowship in greatness. The Gujars are reckoned the best farmers in the district. In garden cultivation a superiority is generally allowed to the Malliárs. The Gujars are quiet and industrious, more likeable than the Jats, but with few attractive qualities. Háfiz Ghulám Muhammad of Dina is perhaps their best man. Next to him are the *kálá chaudri*, and the old lambardár of Jakkar.

The Khokhars.

The quasi-Rájpút tribe of the Khokhars is of small importance. The great name among them in the old time is Dádan Khán, who practically created the present town of Pind Dádan Khán out of old Shamsabád. His descendants have spilt into two main stocks, the heads of which are usually styled Rájás.

The Ahmadábád Rájá.

The Ahmadábád Rájá is a prosperous native gentleman with a large property of his own, and large Government grants. He and his tenants quarrel a good deal.

The Pind Dádan Khán Rájás.

The Pind Dádan Khán Rájás are a poor and thriftless set. They hold little except certain lands in Pind Dádan Khán itself, which were procured for them by Mr. Arthur Brandreth. They have alienated a large part of the original grant. They are in debt, and live idle and not over cleanly lives in the town of Pind Dádan Khán. The best of them are those who get quit of this kind of existence and take service. The family has a pension from Government.

Distribution.

The Khokhars hold a few villages round Ahmadábád and Pind Dádan Khán, including a share of Haranpur.

The Mairs, Kasars, and Kahúts.

The Mairs, Kasars, and Kahúts are three cognate tribes of uncertain origin, who between them form the predominant race throughout the Dhani country.

Divisions of tahsil Chakwál.

The tahsil of Chakwál as at present constituted is made up of the two regions known as Lundi Patti and Dhani, and of four other outlying *ilákas* which were formerly administered from other centres.

Four outlying *Ilákas*.

These four *ilákas* are Hásil of the Bhattis, Dharábi of the Janjúas, Rupwál of the Mairs and Kahúts, and Kallar Kahár of the Awáns. The two main regions of Lundi Patti and Dhani differ a good deal in the character of their inhabitants. Lundi

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Lundi Patti.

Patti occupies the eastern third of the tahsíl. It was generally held in *jágír*. As a consequence it has been settled by small miscellaneous bodies from many tribes. It was formerly divided into the three *ilákas* of Duman, Hasola, and Syadpur of the Ghakars. All the rest of the tahsíl, except the four extraneous *ilákas* already referred to, is included in the Dhani country. This Dhani country is divided into five well known old *ilákas*. Haveli and Badshaháni lie in the centre, and form the country of the Mairs; Bubiál and Chaupeda are to the north, and form the country of the Kasars; to the south lies Kahútáni or the country of the Kahúts. Here again it must be borne in mind that, though these tribes are seldom or never found out of their own *ilákas*, yet within those *ilákas* they are not the sole, though they certainly are the predominant inhabitants, even perhaps in a greater degree than the Ghakars or the Janjúas in their respective territories. The origin of these tribes is doubtful. Their own account is that they came from the neighbourhood of Jamu, joined the Emperor Bábar and were by him settled in the Dhani country, which was at that time little if at all inhabited. They deny that they were ever subject to the Janjúas, or to anybody else except the Emperors and the Sikhs. And indeed all tradition represents them as ever violent and masterful. Their chief men are termed *chaudris*, and the body of Mair *chaudris* collectively is called the *chaudriál*.

Ilákas in Lundi Patti.

The Dhan. *Ilákas* in the Dhan.

Origin of Mairs, Kasars, and Kahúts.

This word, however, is sometimes used to denote the old *chaudris* as opposed to the new men first appointed by the Mahárájá Ranjít Singh. Mr. Brandreth considered that the old *chaudris* were first put into office by Bahádar Sháh, but this is doubtful. The dissensions between all the *chaudris*,—old and new,—have been thus graphically described by the same authority: "The curse of division fell upon them in their turn. Of the Mair *chaudri's* sons, one took Chakwál, the other Badshaháni. The Chakwál branch divided into Chakwál and Jabairpur, aud later still the great *chaudris* of Kot separated from the former, and possessed themselves of the ancient Janjúa Mahál of Thirchak and its subordinate villages. In Chaupeda, the Kasars of Mangwál and Minwál divided the *iláka*; and Bal and Bhikári claimed a share, though a small one, of the rights of the Dulla *chaudris* in Bubiál. But worse divisions soon came. Chakwál again divided into two factions—Tora Báz Khán and Mehr Khán. All the other *chaudris* took one side or the other, till the whole *pargana* was in a ceaseless fight, and Government could get no revenue. During the dissolution of the empire, *chaudri* Ghulám Mehdi, the chief of Kot, had called in Maha Singh to protect them from the Awáns, the Janjúas, the Ghakars; and Maha Singh had agreed in return to give the old *talukdárs* 200 *asámis* * rent-free, and to uphold their contract for the rest of the *pargana*. But Ranjít Singh could get nothing from them. He first sent General Ventura, who made some severe examples, and appointed new *chaudris*. But the old *talukdárs* or *chaudrial* soon regained possession, and held the country off and on alternately, till at last they

Dissensions among the *chaudris*.

* "*Asámi*" was a technical term of the old Chakwál Revenue Administration. It meant a plot of 180 acres of cultivated ground.

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Dissensions among the *chaudris*.

invited the new *chaudris* to a banquet; and, at a signal to clear the table, had them slaughtered in the Sikh Kárdár's presence. One, Sultán of Chaoli, escaped; not liking the invitation, he had stayed at home and collected his retainers, and thus saved himself from the party who set off to kill him also. On this the Mahárájá came in person, dispossessed the *talukdárs* and settled each village either with the old proprietary body, or with the new cultivators. *Chaudri* Ghulám Mehdi alone escaped this confiscation, and was allowed to retain the Rupwál *iláka*. The Mahárájá probably considered it desirable to have at least one of these powerful chiefs on his side. The others were carried off to prison, but soon bought their release, and obtained 110 *asámis* rent-free in lieu of all claims for the future. In these villages they recovered their proprietary rights, though many of them were changed or confiscated some years later by Mahárájá Goláb Singh. But in 1848, they joined the Sikhs, and further disgraced themselves by making over a lady (Mrs. George Lawrence) to them. For this all their *jágírs* were confiscated, and all their proprietary rights, wherever they held any. Some escaped a portion of this latter penalty, such as the *chaudriál* of Kot and Dulla, though the former were ejected on this order a year or to two later. In the late mutiny they distinguished themselves by some services and by general good conduct; and thus obtained a reversal of their attainder. Permission was granted them to sue for all ownership rights they had held up to our rule, and few cases in the Settlement have been more complicated than these. Small *jágírs* were also restored to a few of the heads of the families."

Character of these tribes.

These three tribes rarely take service. They are a passionate and revengeful race. Murders are very common among them,—not for plunder, but from motives connected with women or land. They are good cultivators, but somewhat exacting landlords. Altogether they are far more materially minded than either the Ghakars or the Janjúas. Envy is their most odious quality. Every family is distracted with mean jealousies which are sometimes prosecuted with astonishing rancour. The grant of a chair or some slight honorary distinction to one member of a family throws all the rest into commotion. Not unfrequently this failing degenerates into criminal greed. One of the Kasar *chaudris* himself told Mr. Thomson that he went in fear of his life till the birth of two sons secured his inheritance for his own family. From similar motives one of the Mair *chaudris* abandoned his own village and took refuge in another. This is not a pleasing description. It is fair to add that these vices seem to be gradually losing strength. At any rate they are awake to the expedience of working through legal channels. Many of the *chaudris* are personally very engaging. Good horsemen, keen sportsmen, with frank manners and a good presence, it is sometimes difficult to understand how they should have such a mean side to their character.

Distribution of these tribes.

The principal Mair families are at Chakwál, Chak Naurang, Badshahánái, and Kot Rupwál. There are many others not unimportant. Dulla is the chief seat of the Kasars, and Kariála of the Kahúts. The new *chaudris* of the Sikhs are often known as *zamindari chaudris* to distinguish them from the old *chaudrial*. Many *chaudris* of all sorts hold large *ináms*.

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The Awáns.

Theories as to their origin.

Nearly the whole tahsíl of Talagang and many villages in other parts of the district also are held by the Awán tribe. The origin of this people is obscure, and has given occasion to a good deal of controversy. Mr. Arthur Brandreth thinks that they may be descended from Bactrian Greeks, but Mr. Lepel Griffin considers that all real Greeks would have refused to stay in the Panjáb. General Cunningham holds the Awáns to be Rájpúts who were settled here long before the time of Alexander. Anu, the brother of Yádu, was their ancestor, and Taxiles of the Greek histories was an Awán *chaudri*. But on the other hand Mr. Brandreth thinks that the Awáns came as an organized army from Herát not more than 250 years ago; and that they occupied their present territories with a strong hand. The Awáns themselves say they are descended from Qutb Sháh, and, through him, from Ali, the Prophet's son-in-law. They came from Herát with Máhmúd of Ghazni. By him they were settled round about Sakesar. Thence they have occupied their present territories partly by peaceful settlement, and partly by driving out the Janjúas and other races. In such a conflict of authorities it is difficult to decide. The tribal tradition is probably a fable slightly connected with fact. Arabian ancestry is a favourite fiction, and Máhmúd of Ghazni is the common *deus ex machinâ* to save the confession of a primitive idolatry. On the other hand General Cunningham's theory seems incredible. It is supported by little or no evidence. It is almost unheard of for undoubted Lunar Rájpúts of high pedigree to deny their origin, and to be joined in the denial by all their neighbours. Similarly the fancies about Bactrian Greeks are a mere surmise, and a very recent arrival of the Awáns is contradicted by historical evidence. The most probable account seems to be that the Awáns are a Jat race who came through the passes west of Dera Ismail Khán, and spread northward to the country round Sakesar. Here they were found by Máhmúd of Ghazni, and by him converted to Islám. This version is apparently in accordance with the less adulterated traditions of Dera Ismail Khán. It also agrees with those traditions recorded by Mr. Griffin, which point to a former Hinduism. It is moreover in agreement with the common speech of the country which always classes the Awáns as *Zamindár* or low born men, in contradistinction to the *Sáhu* or gentle tribes of Janjúas and Ghakars. Out of their own peculiar territory the Awáns are frequently set down as Jats of the Awán *got* in the records of the first Regular Settlement. This is good evidence of the popular opinion. In Pesháwar they are always reckoned as Hindkis. As to their recent arrival in the district it is sufficient to state that in the *Ain Akbari* the Talagang tahsíl is described as Mahl Awán, and there is nothing to suggest that the name was at all a new one.

Distribution and character of the Awáns.

The Awáns so completely fill the tahsíl of Talagang that it is usually known as the Awánkári. In this district they also hold the Vunhár upland in the Salt Range and many other estates elsewhere. East of Kallar Kahár they are nowhere predominant. They are frank mannered and pleasing. Although the groundwork of their character is material, prudent, and calculating, yet this is often overlaid with a good deal of passionate impatience, which leads to head-

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strong violence. They are certainly vindictive and prone to keep alive old feuds. In prosecuting these they are always ready for a riot, and often do not hesitate at a murder. These characteristics have led to an undefined but well understood factious organization. The larger part of the tahsíl is split into two parties, to one of which nearly every headman belongs. The bands of connection are not very tightly drawn, but everywhere each member of a party can look for general support and countenance from the other members. In the old time every son naturally belonged to the party of his father. But recently some of the younger men have chosen for themselves, and have gone over to the enemy. This has excited bitter animosity; and in one instance it led to a determined attempt to disinherit the deserter. The Awáns are physically a strong and broad shouldered race, but not generally very tall. As cultivators they are strenuous, but slovenly. Apart from the *chaudris* they are essentially a peasant tribe.

Minor tribes. Malliárs.

The minor tribes are not very important. There are one or two small Bhatti *ilákás*—chiefly round about Chinjí and Hásil. The Malliárs—who are Aráiens—are to be found in all the more fertile villages. They nearly always occupy irrigated areas. Generally their wells are of the small type, with only two or three acres of ground attached. These plots are cultivated like gardens,—heavily manured, always double, and sometimes triple cropped in the year.

Saiads.

Saiads occur all over the district in scattered villages. As a rule they are bad cultivators, lazy, arrogant, and not only willing but proud to live wholly or partially upon alms and offerings. Round Jhelam and in the Pabbi there are a few scattered Rájpúts who claim descent from Rájá Salivahan of Siálkot.

Bhatti Rájpúts.

Jats.

Jats of different clans are numerous. But the word is applied very loosely to any low-born men of uncertain origin. The Jálaps, the Phapras, and the Lillas are more interesting.

Jálaps, Phapras, and Lillas.

They are all semi-Jat tribes. Each inhabits a well defined area in the plains below the Salt Range, and none of them is ever found outside its own boundary.

Mercantile castes. Kashmíris.

The Hindus and the trading classes of the district are almost interchangeable terms. Except a few *jágírdárs*, *fakirs*, and Government servants or pensioners, the whole Hindu population is engaged in trade, while at the same time Musalmán traders are very few. These Khatri shop-keepers call for no remark. Most of them are petty village-dealers. The better class do a large money-lending business, and some of them speculate a good deal in salt and timber. Both these trades, however, are likely to decline. It may be mentioned that the Sikh Khatris of the district contribute to the Government service (Military, Police, and Civil) some of the best servants we have. Though this class numbers only 5 per cent. of the total population, it contributes nearly half of the whole number of Government servants recruited from the district, and enjoys more than half of their whole salaries. It affords an instance, not usual in India, of a race who are at the same time traders and soldiers. The principal Khatri sub-divisions returned at the Census of 1881 were as follows:—Bunjáhi, 13,362; Báhri, 3,596; Khokhrán, 16,578. Of the Aroras 5,608 returned themselves as Dahre, and 5,335 as Uttarádhi.

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Kashmíris.

Kashmíris in thousands are settled in the district, whose ancestors migrated generations ago. Some are landowners and cultivators, but the greater number are mechanics, traders, and labourers. Not a few serve the State as private individuals in various capacities There is little or no difference between them and the ordinary Panjábi Muhammadans. Besides these men there is a considerable annual immigration of men, who come down in the winter in search of employment, especially as day-labourers and reapers, returning to Kashmír as the summer sets in; and the number of these men was probably unusually large in 1881, owing to the scarcity in Kashmír and the demand for labour along the route to Kábul.

SECTION D.—VILLAGE COMMUNITIES AND TENURES.

Village tenures.

Table No. XV shows the number of villages held in the various forms of tenure, as returned in Quinquennial Table XXXIII of the Administration Report for 1878-79. The following figures show the village tenures as classified at the recent revision of Settlement :—

Tahsil.	Zemindari.	Pattidari.	Baiachara.	Total Estates.
Jhelam ...	17	34	385	436
Chakwal ...	12	32	203	247
Talagang ...	5	2	79	86
Pind Dadan Khan ...	13	6	191	210
Whole district ...	47	74	858	979

Several of the *zamindári* villages are held by single proprietors, and in the *pattidári* villages the *pattidári* arrangements are often in a condition of great decay.

Some of the villages, *boná fide* estates held by one joint and undivided proprietary body, are of enormous size, larger probably than in any other part of the province. Láwa, for instance, contains over 90,000 acres, exclusive of the great Láwa *rakh*, and extends 14 miles by 16. Thoha has nearly 50,000, and is 10 miles by 12. Khandwál stretches for nine miles, and contains 35,000 acres, and there are 34 villages which have above 10,000 acres. Their position as chiefs of these enormous villages gives many of the headmen of this district an importance not known among the peasantry elsewhere. In these huge estates the whole inhabitants are not massed together in one village site, but most frequently the actual cultivators of the soil live in scattered hamlets. This is especially the case where the country has been under the rule of a dominant tribe such as those of the Awáns or Ghakars. In such estates the superior tribe live in a large central village with all the village servants, while the Jat cultivators occupy small hamlets of from one to 20 houses. There are sometimes as many as 30 or 40 of these hamlets in a large estate, some of them mere farm-houses, others considerable villages. In many cases it was found just or necessary, at the time of the Regular Settlement, to form such *dhoks* into separate estates paying a small annual sum to the parent village. But this was only done when the cultivators proved a more than ordinary degree of independence of the superior

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tribe. Where, however, both the villages, the parent as well as the *dhok*, were of the same caste, the Settlement Officer allowed separation when claimed by the *dhok*, if he considered it strong enough to stand by itself.

Proprietary tenures.

Table No. XV shows the number of proprietors or shareholders and the gross area held in property under each of the main forms of tenure, and also gives details for large estates and for Government grants and similar tenures. The figures are taken from the Quinquennial Table prepared for the Administration Report of 1878-79. The accuracy of the figures is, however, exceedingly doubtful; indeed, land tenures assume so many and such complex forms in the Panjáb that it is impossible to classify them successfully under a few general headings. The table showing the holdings of the different castes already given in Chapter III (page 68) shows the areas held by owners and tenants of each caste.

Superior and inferior proprietors. Malik Qabzah.

The curious double tenures resulting from the diverse degrees in which the subordinate and cultivating classes had freed themselves from the dominant tribes whose tribal territory they held, were found to exist in Jhelam, no less than in Hazára and the frontier districts to the west; but the diversity was smaller, perhaps because the political disturbances of the period immediately preceding annexation had been less in a district nearer the centre of Sikh rule. Perhaps too the matter was not so well understood at the time of the Regular Settlement of the Jhelam district, when the tenures were investigated and given their present form. Mr. Brandreth, who made the Regular Settlement, thus describes his action and its results:—

"The disputes, though very different in kind, were all the same in principle. In one, a Gakhar family were disputing with their Jat tenants; in another, one class of Jats or Gujars claimed to be superior owners of the land held by another branch of their own tribe, living in the same village. In a third, an Awán or Kasar family claimed to have superior right over the rest of their brotherhood. In a fourth, a Janjúa Chief claimed to recover a superior right in the villages from which the Sikhs had long ago dispossessed him. In all, the main line of argument was the same. The tenants would show how the Sikh *kardar* had bullied the old owners and protected them; would declare that the old owners were only contractors, and never land-owners; would endeavour to prove that these owners had ceased to manage the village for 50 or 60 years; and always ended with the great point in their mind, *viz.*, that they had cultivated 4, 8, or even 20 generations, and had never paid a rent-rate or *malikána*. 'Whatever we have paid, they always paid the same,' was the universal cry. On the other hand, the Ghakar or other owners would call on the *kanúngo's* records to show that for hundreds of years they had always been recorded as owners, *wáris;* that far and wide they were so known; they would ask (and this was often a most important point) how, amidst such powerful tribes, always plundering each other, a small Jat community could have existed for a day except under their protection; they would point out that they had been seized and imprisoned for the balance, and that it was only when they had nothing left that the *kárdar* levied the rent from every one; or they would prove that, though the *kárdar* had ejected them from the management they had always allowed them some land rent-free or some present or percentage in lieu of their rights. The Awán or Kasar would show that, though the defendants were his relations, he had ruled the village entirely alone, and that under our rule he had taken grain rents even from his own cousins. The Jats or Gujars would show that they had founded the village, and had only allowed the others to come in subsequently out of kindness;

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Superior and inferior proprietors. *Malik Qabza.*

that though the Sikhs had left no profits to the owners, yet that they alone had been headmen and had managed the village, and located cultivators; this latter point was all important in each of these cases. The claimants would also attempt to show that they had taken certain fees on marriages or had levied door dues from the village servants, or that they alone had collected and expended the village *malba.** The Janjúa Chief would endeavour to show that, though the Sikhs had ejected him, he had returned now and then, and obtained presents or fees from his old tenants; and would show that even the Sikhs had never disputed his real ownership, and that when they left, he returned to his village and took his land without any one's permission.

"In these cases I was a good deal mistaken at first, as I was not sufficiently acquainted with the history of the country. It was moreover then the rule to aid the cultivators as much as possible, and to depress the sons of the sword. But as I became more acquainted with the country, I learned that these owners had been left much more real power than had been the custom nearer Lahore. True they had never taken any rent or *málikána;* it was not the custom, as the Sikh left nothing, but they were allowed instead some land rent-free or a certain sum from the *kárdár's* collections. As long as the land was well tilled and the *kárdár* got his revenue, he did not interfere with these powerful owners, and they kept the Jats more as industrious serfs than anything else. They did not want to eject a good cultivator, but never hesitated to do so, if for any reason it seemed advisable: the copy-hold was really at the will of the lord, and not nominally so. For the reasons given above, my first decisions were decidedly hard upon the owners. I generally made the cultivators sub-owners paying some fees to the old owner. In some villages, I did not even allow this. In the later cases, I have gone a good deal the other way. I learnt how very similar the rise of right in landed property at home—especially among the Scotch nobility—had been to that which was occurring in this country, before we suddenly came upon them with our record of rights and equalized everybody.

Málik qabza.

"Where the tenants were not a separate body, but living with the owners in the centre village, the case was different. They could not be created subordinate owners in the way the Jats had been, when residing in distinct hamlets; and yet they could not be made co-sharers. How then were those tenants to be recorded who had acquired such prescriptive right that they could not fairly be made to pay a rent-rate? This difficulty gave rise to the institution of the *málik qabza,* who has often been called a copy-holder, but is really nearer the English free-holder, or owner of an estate tail, than any one else. The only limitation to his rights is the universal law of pre-emption; if he sells his land, he must offer it first to the village owners. Latterly he has sometimes been made to pay a small fee or seignorage due to the old owners, but this has not interfered with his rights as proprietor. He has entire rights to all the products of his land, trees, mines; can let his land on lease to whomsoever he likes, and can sell it whenever he pleases. Still he is only a *málik qabza,* only owner of the particular plot he holds, and has no share in the rights or responsibilities of the village. It is undoubtedly an inconvenient institution; it is like a loose brick in a wall, put in without any cement round it; and, if there are many in the village, the area on which losses caused by defaulting sharers fall, is so far limited, and of course the stability of the village is rather precarious. Moreover, the tenure is a cause of great confusion. The *málik qabza* is not responsible for losses, and therefore he cannot claim a share in the reduction resulting from increased cultivation; he is only to pay the sum fixed at the Settlement, and has nothing to do with the village. The old owners, as lords paramount, possess the right of escheat. There is this peculiarity, that when the owners have no other means of meeting their losses, they can make this *málik qabza* a sharer and owner in the village and call upon him to pay his share like the others.

* The common village fund, out of which all public expenses are defrayed by the head-men.

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Village Communities and Tenures.

Málik qabza.

"On the whole, though it is a curious institution, I think under our peculiar views of tenure it is a good device. Of course I would rather see owners with full power over their tenants, as in England, but as we cannot fairly set aside the claims of these old hereditary tenants, I think they are better recorded as *málik qabza* than as nominal tenants paying nothing.

"The classes who have generally been made *málik qabza* are relations of the owner, where one or more members of a family have gradually usurped the whole village; old tenants of *zamindar* castes, where the proprietors have been allowed little or no power over them; persons who have obtained land by gift on marrying the daughter of a sharer; men who have purchased particular fields, or who have been put in possession by the *kárdár* against the will of the proprietors, and maintained there; holders of rent-free lands who have obtained a prescriptive title, and such like. Another large class are those families, whose headmen or representatives have managed the village during the temporary dispossession of the real owners, either when turned out by the Sikh *kárdár* or ejected by us for the events of 1849. In those villages where the owners were allowed by Government to recover their rights, the subordinate tenants whom we had temporarily treated as owners, were often recorded as *málik qabza*, though they have been more generally recorded as subordinate sharers and owners of their portion of the village paying five or ten per cent. fees, called *wárisána*, to the old and now restored proprietor. The great difference is, that with these rights they have a share in the village common and the village responsibilities, and they can continue to hold the office of lambardár. The *málik qabza* has no right whatever to this office."

Málik qabza and inferior proprietors at the revision of Settlement.

At the recent revision of Settlement the landowner, whom Mr. Brandreth describes as inferior proprietor in the above quotation, was found to have full rights of ownership, subject to the payment of the *talukdárí* dues which are described below. The *málik qabza* also was defined as "a man who is full owner of the land he occupies upon that *status*, but who has no share in the communal rights and liabilities." He is, so to speak, a village by himself—a sort of corporation sole—which for fiscal convenience is merged into another community. But, as has been remarked by Mr. Brandreth, "he is not free from the local custom of pre-emption." Owners of this latter kind are numerous in the district. In many cases, though not always, they pay a *málikána* or *wárisána* charge in addition to the revenue. This *málikána* was imposed at the first Regular Settlement—sometimes as a direct charge of so many annas in the rupee; sometimes by fixing differential rates for full owners and *qabze* owners; and sometimes by granting a remission of some part of the demand originally fixed, and confining the benefits of this remission strictly to the full owners or *wárisán*. In the recent re-Settlement these differences have been avoided. The same rates have been fixed upon all. But in addition a *málikána*, in strict proportion to that formerly paid by them, has been imposed upon all *málikán qabze* from whom it was due. There are altogether 4,494 holdings of *qabze máliks* who pay the general rates and nothing more. The whole revenue charged upon these holdings is Rs. 28,981. There are 6,354 holdings which pay *málikána* charges of various amounts. The revenue charged upon these holdings is Rs. 49,042, and the additional *málikána* charges amount to Rs. 3,546, or an average of rather more than 7 per cent.

Distribution of *málikán qabza.*

These proprietors of their possession are much more common in the Pind Dádan Khán tahsíl than elsewhere. In tahsíl Jhelam there are none who pay *málikána*.

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Talukdári dues.

Closely connected with this subject is that of the *talukdári* dues. These dues were created at the Regular Settlement, and were generally in favour of old families of Ghakars, Janjúas, Mairs or Kasars, who were thought to have exercised feudal predominance or actual rights of ownership in former times over the villages or individuals charged with the payment of the dues. Sometimes the method observed was to create a surcharge upon the revenue payable to the *talukdárs* This was usually done when the dues were payable in one village and receivable in another. Sometimes a deduction was given from the Government revenue; but given solely in favour of the *talukdárs* or *wárisán*, while every one else continued to pay as before. This was the usual method where the *talukdárs* formed a portion of the village community upon whom the charge was laid. In the recent revision of Settlement these dues were all maintained in their old proportions, but they were reduced to the one model of a surcharge or *málikána* in addition to the revenue. These dues are far more extensive in tahsíls Jhelam and Pind Dádan Khán than elsewhere. At the same time the *talukdárs* in the latter tahsíl are comparatively very few, and therefore their rights are valuable. In the other tahsíls the dues are divided among too many sharers to be much worth. The whole number of recipients is 988. The whole amount received is Rs. 3,805. Of this amount Rs. 1,927 is paid to 28 persons in tahsíl Pind Dádan Khán. Therefore the *talukdárs* in the other three tahsíls receive on the average less than Rs. 2 a piece. These fees are levied from 51 villages in tahsíl Jhelam, 19 in Pind Dádan Khán, 9 in Chakwál and 3 in Talagang. The persons who pay them are sometimes entered as *malikan adna*, and sometimes as simple *máliks*. Practically they are full *máliks* liable to pay slightly heavier taxes than their neighbours.

Tenants and rent.

Table No. XVI shows the number of tenancy holdings and the gross area held under each of the main forms of tenancy as they stood in 1878-79, while Table No. XXI gives the current rent-rates of various kinds of land as returned in 1881-82. But the accuracy of both sets of figures is probably doubtful; indeed, it is impossible to state general rent-rates which shall even approximately represent the letting value of land throughout a whole district. The prevailing rent-rates as ascertained at the Settlement of 1880 are shown at page 86, as also are the areas held by the several classes of tenants. The relative numbers of owners and tenants are shown in Chapter III (page 68) as ascertained at the Settlement Census. Of the whole cultivated area 68·3 per cent. is occupied by the individual owners, and 17·7 per cent more by tenants-at-will. Thus 86 per cent. on the whole is practically at the disposal of the owners.

Tenant right.

The regulation of tenant right in this district was mainly effected by Mr. Arthur Brandreth at the first Regular Settlement. During the Summary Settlements some tenants paid rents in kind; but the great majority paid in cash at the Government revenue-rate and no more. They were thus on a practical equality with those whom we now recognise as owners. This equality was the natural outgrowth of the Sikh system which generally refused to

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recognised any privilege *status* between the Government and the cultivator. Mr. Brandreth put an end to this state of matters. In every village he first defined and set apart those whom he considered to be owners. All other cultivators were distributed among four classes of tenants, of which the first three were granted rights of occupancy, and the last were the tenants-at-will.

Classes of tenants.

These classes were as under, *viz.* :—

I.—Ancient tenants, *asámi kadími*, being those who had come in before the great famine of 1783.

II.—Old tenants, *mustakil purána*, who had been in possession about 50 years on the average (say from 1810 A.D.)

III.—New tenants, *mustakil naya* or *jádid*, who came in after 1810, but were considered to have a claim to rights of occupancy.

All the above classes were granted rights of occupancy, or, to use the language of the district, were made *muzárián mustakil.* The fourth class comprised all the tenants-at-will or *muzárián ghair mustakil.* This system of classification only developed itself after the Settlement had been some time in progress. It was therefore never applied in tahsíl Jhelam, where only the broad distinction of *mustakil* or *ghair mustakil* was recorded. In the other three tahsíls, however, it was generally enforced. But many modifications were allowed in individual cases, especially in the matter of rent. For the question of rents was also regulated by Mr. Brandreth.

Rents.

Rents in kind were recognised and maintained wherever it was possible to do so. Cash rents were regulated as follows:—The ancient tenants of the first class were charged the revenue-rates and cesses with a small additional sum for *malba.* The old *mustakil* tenants or second class paid the revenue rates and cesses, together with a *málikána* of from two to four annas on each rupee of revenue. The third class or new *mustakil* tenants paid the same as the second class, except that in their case the *málikána* was put at from four to eight annas. In actually assessing the *málikána* the theoretical scheme was often a good deal modified. The cash rent of tenants without rights of occupancy could not of course be fixed. But the rate then existing was duly set down, and in practice it has not been very often since departed from. Mr. Brandreth intended that these rents should be recorded in the gross result merely, without details of the calculation by which it was reached. And it was further proposed that these gross rentals should be modified periodically in accordance with the price of corn. This part of the scheme has always been a dead letter. It was impossible to keep secret the details of the calculation, and in practice all the parties concerned have paid attention to nothing but these. No one has ever wished or attempted to have his rent revalued upon a corn standard. And so it has come about that all tenants pay rentals in kind, or rentals in cash equal to the sum assessed upon the land with cesses and with or without a *málikána* or *malba* surcharge of various amount.

New classification of tenants.

In the record of the recent Settlement all these rentals have been carefully maintained in their old proportions. They all now take the form either of rental in kind, or of a payment of a *málikána* in cash

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New classification of tenants.

in addition to the revenue and cesses assessed upon the land. But the old classification of occupancy tenants has not been followed. It has no connection with the Punjab Tenancy Act; and it is therefore practically obsolete. With the permission of the Financial Commissioner, in the new record all tenants with rights of occupancy have been recorded as holding under either section 5 or section 6 of the Tenancy Act. No further discrimination has been attempted. In assertaining the members of each class the following rules were observed:—All occupancy tenants who paid rental in kind were placed under section 6 without enquiry. All occupancy tenants who pay rent in cash were also placed under section 6 unless the records of the first Regular Settlement showed good reason for placing them under section 5. In all cases of doubt or of importance the attestation of tenant *status* was conducted separately. The practical result is that the more part of the old *asámís kadími* with a few others have been placed under section 5; and the rest under section 6.

Rents in kind.

Rents in kind are fixed by custom, and are uniform over large areas. No one has ever tried to enhance them, and it is probable that they do not admit of much enhancement. These rents are nearly always the same for all classes of tenants. Everywhere the *kamíns'* fees are first deducted before any division of the produce takes place. These fees are from ten to twelve per cent. in the three tahsíls of Jhelam, Pind Dádan Khán and Chakwál, except in the well-irrigated lands of Pind Dádan Khán, where the rate is 15 or 16 per cent. After these deductions have been made, the remainder of the produce is divided as follows: In tahsíl Jhelam landlord and tenant share and share alike both in the grain and in the straw. In tahsíl Pind Dádan Khán the landlord generally takes half the grain, but in Diwánpura, in Kalla, and in part of Lilla only two-fifths. Of the straw he gets from $\frac{1}{4}$ to $\frac{1}{2}$ in most of the villages of the Ahmadábád and Jálap *ilákas*, with a few others elsewhere. But in general the tenant pays only one load of straw per harvest. In tahsíl Chakwál the grain is equally divided, except in the villages near Thirchak, between the Dhrábi Kas and the Gabhir, where the tenant keeps three shares out of five for himself. The straw of the pulse crops (*moth*, &c.,) is divided as the grain. But all other crops pay only one load of straw to the landlord.

In tahsíl Talagang the fees paid to *kámíns* are about 6 per cent. on *báráni* and 8 per cent. on irrigated land. The whole remaining crop, both grain and straw, is divided. The landlord's share varies from one-fourth to one-half. But by far the most common rate for unirrigated lands is one-third. For irrigated lands—which are very small in extent—one-third and two-fifths are the more usual rates, and are nearly equally prevalent. Though the rates vary within the tahsíl, yet they are generally constant over considerable areas. For assessment purposes the share of the gross produce ordinarily payable as rent by tenants-at-will was assumed at the late Settlement as 31 per cent. in Talagang, and 45 per cent. in the other tahsíls.

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Extent of tenant-holdings, and kinds of rent.

The individual holdings of tenants are not large. The average per Assessment Circle is nowhere greater than seven acres. Two to four acres is the more common rate. But the gross area in the hands of the whole body of tenants is very considerable. Tenants with rights of occupancy hold 14 per cent. of the entire cultivation, and tenants without these rights hold 17·7 per cent. The following two tables give, by tahsíls, the acreage held by each class of tenants, distinguishing also the nature of the rents paid:—

I.—Acreage held by tenants paying rents in kind.

Tahsil.	Occupancy tenants.	Tenants-at-will.	Total.
Jhelam ...	1,572	13,868	15,440
Pind Dadan Khan ..	4,136	22,986	27,122
Chakwal ...	27,316	51,492	78,808
Talagang ...	13,119	46,435	59,554
Total district ...	46,143	134,781	180,924

II.—Acreage held by tenants paying cash rents.

Rents charged at	Tahsil Jhelam.		Tahsil Chakwal.		Tahsil Talagang.		Tahsil Pind Dadan Khan.		Total.	
	Occupancy tenants.	Tenants-at-will.	Occupancy tenants.	Tenants-at-will	Occupancy tenants.	Tenants-at-will.	Occupancy tenants.	Tenants-at-will.	Occupancy tenants.	Tenants-at-will.
1.—Lump rate on holding ...	5	369	686	318	110	107	42	16	843	810
2.—Acreage rates not reckoned on the revenue ...	...	182	172	121	2,718	...	...	9	2,890	312
3.—Revenue rates only ...	330	1,479	703	150	3,257	1,740	1.279	2,651	5,569	6,020
4.—Revenue rate, plus *malikana* reckoned per rupee of revenue—										
(*a*)—Less than 2 annas ...	14,782	9,036	11,353	1,035	5,055	503	5,266	671	36,456	11,245
(*b*)—Above 2 annas and up to 4 ans.	3,880	3,905	19,014	1,972	4,598	123	1,718	352	29,210	6,352
(*c*)—Above 4 annas up to 8 annas ...	...	2	4,075	47	1,228	1,988	...	..	6,303	2,037
(*d*)—More than 8 annas ...	...	2	789	...	...	...	...	...	789	...
Total Tahsil ...	18,997	14,975	36,792	3,643	16,966	4,461	8,305	3,699	81,060	26,778

It will be seen that there are hardly any real cash rents. The great majority of the *málikána* rentals are four annas in the rupee or less. These Tables must be understood as referring to the time when the new assessments were announced, without regard to subsequent litigation.

Lambardári arrangements.

The lambardári arrangements of the district have never yet assumed a permanent form. The number of lambardárs appointed during the Summary Settlements was very large. When the Regular Settlement commenced, Mr. Brandreth was strongly in favour of having only one or two lambardárs in a village who might receive a substantial remuneration. He therefore began cautiously to confine the office to the old headmen of the Sikh times. At first his plan

Lambardári arrangements.

was successful, but when the working of it was handed over to his assistants, the selection of these headmen was carelessly carried out, and gave rise to many appeals and much dissatisfaction. Some of the dismissed men were restored individually; and at last a general order was issued directing the restoration of all lambardárs who had been in office under the Summary Settlements. In carrying out these restorations the dismissed men were sometimes put back without conditions, and sometimes only for their own lives without remainder to their issue. In the final Report of his Settlement, Mr. Brandreth expressed himself in favour of a gradual reduction in the number of the lambardárs by the absorption of all death vacancies which it did not appear necessary to fill up. These views were supported by the Commissioner, and for a long time were generally acted upon. When a lambardár died his successor was not appointed as a matter of course; but the whole circumstances of the village were passed in review, and, if the deceased man did not appear to have had any strong claims to his appointment in the first instance, his office was frequently done away with, and its emoluments made over to one of the remaining lambardárs. This was especially the case where the deceased man had been put in for life only, or where the retention of the lambardári in his family did not seem advisable or profitable upon administrative grounds. But the lambardári arrangements of the district have recently been reviewed by the Financial Commissioner. As a result of the instructions then issued, it seems probable that in future the appointments will be made for the more part in regular succession under the ordinary rules, and that reductions will only be allowed in exceptional cases or on proof of real necessity. The number of lambardárs in the district is shown in the margin according to tahsíls.

	No.
Jhelam ...	792
Pind Dádan Khán ...	582
Chakwál ...	550
Talagang ...	206

No *ala* lambardárs.

Lambardárs receive 5 per cent. on the revenue, except in a few villages where there are special arrangements. There are no *ala* lambardárs, and to introduce them would be disastrous to the district. Lambardárs can be reduced wherever necessary; but to introduce differences of rank among those who are maintained would cause an enormous amount of malignant jealousy.

Place of *zaildárs* taken by *inám khwars*.

There are no *zaildárs* properly so called; but at the first Regular Settlement a system of cash *ináms* to the leading *chaudris* was introduced, which is described in Chap. V., Sec. B.

Malba.

The *malba* under the old Regular Settlement was generally assessed upon ploughs. Its realization was often a doubtful and difficult business, and it is doubtful whether the difficulties connected with it are likely to cease. In a village where the lambardárs are weak or unpopular, *malba* is always paid with reluctance, which is partly due to a real spirit of grudging, and partly to the desire to inflict annoyance.

Kamiána.

In some villages, but not in all, the *kamíns*, or village menials pay small dues to the owners. A report submitted by the Deputy

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Kamiána.

Commissioner in 1873 showed that the cess was then levied to the following extent:—

Tahsil.	No. of villages in which levied.	Amount of annual levy in Rupees.
Jhelam ...	16	339
Pind Dadan Khan ...	73	2,581
Chakwal ...	69	1,716
Talagang ...	19	415
Total district ..	177	5,051

Probably much less is now levied. The proceeds are, as a rule, applied to reduce the amount of the chaukídári charges.

Village menials.

The principal classes of the village menials, their legitimate duties and their probable estimated income from various sources, are detailed as follows:—*Lohárs* (*blacksmiths*)—Are chiefly occupied in supplying the wants of the villagers in ploughshares and other husbandry requisites. Their probable income from all sources is about Rs. 72 per annum. *Turkháns (carpenters)*—Are also occupied in the manufacture of agricultural implements of various kinds; their probable annual income being the same as of blacksmiths. *Naís* (*barbers*)—Are chiefly employed in the discharge of their ordinary professional duties. They are occasionally used in marriage and betrothal negotiations and in connection with funeral ceremonies, and are occasionally liberally rewarded for their special services, especially in nuptial festivities. Their estimated annual fee is about Rs. 60. *Ghumárs and Mussalís.*—Potters and *mussalis* supply their own and neighbouring villages with earthenware and baskets, and aid the *zamíndárs* in cultivation when required, receiving payment in kind; their estimated average annual income being Rs. 72 and 48 respectively *Telis* (*oilmen*).—Supply the village inhabitants with oil and oil-cakes, usually receiving out seed as remuneration; they sometimes aid in cultivation. *Mirasis*—Are employed on marriage ceremonies as singers and jesters, and are remunerated in kind; annual probable income being Rs. 48. *Mochis (shoemakers)*—Are employed principally in making and repairing shoes and occasionally assist in cultivation; also paid in kind.

Agricultural labourers.

The demand for daily labourers is mainly supplied by immigrants from the direction of Ghazni and from Kashmír. Patháns and Kashmíris enter the district in large numbers in time for the autumn harvest, and stay out the winter; but after the spring harvest they generally return for the summer to their homes. Reapers receive in lieu of pay one sheaf out of every 20 sheaves which they cut. This sometimes in a good harvest is equal to a rate of nearly four annas a day. When paid in cash, the rate of wages varies from two to four annas. The wages of labour prevailing at different periods are shown in Table No. XXVII, though the figures refer to the labour market of towns rather than to that of villages.

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Petty village grantees.

The last two lines of Table No. XVI show the number of persons holding service grants from the village, and the area so held. The figures are extraordinarily small, but they refer only to land held free of revenue, which is by no means the only form which these grants assume. Sometimes the land is leased to the grantee at a favourable rent, or on condition of payment of revenue only; sometimes the owner cultivates and pays the revenue, making over the produce to the grantee; while occasionally the grant consists of the rights of property in the land, which, subject to the usual incidents, such as responsibility for revenue and the like, vest in the person performing certain specified services at such time and for so long as he performs them. These grants are most commonly made for maintenance of monasteries, holy men, teachers at religious schools, and the like.

Partitions of village common.

In the partition of village common it is almost a universal rule in all *Baiáchára* villages to fix the share of each man in proportion to the amount of Government revenue which he pays. This is called *taksím hasb rasad khewat.* It is sometimes a difficult rule to apply fairly in riverside villages when a partition is applied for shortly after the stream has washed away the lands of some of the shareholders. One party insists upon a partition based upon things as they are; another claims to have it based upon things as they once were and as they may be again. Mr. Thomson writes: "I do not think there is any real custom on the subject. The decision lies entirely with the officer making the partition. In some cases it is probably the right course to refuse partition altogether, but these are rare." Common lands are generally common of the entire village; but in some instances, although the village is otherwise purely *Baiáchára,* there are separate commons belonging to different parts of it.

Mortgages.

Most mortgages are usufructuary, but as a rule the mortgagee does not actually take possession. The mortgagor continues to cultivate, and pays a rent in kind to his mortgagee. Sometimes he also continues to pay the revenue, but generally this is done by the mortgagee. For such mortgages it is not usual to fix any period. They run on until the mortgagor chooses to redeem them. It is usual to stipulate that such redemption may only be made at the *rabi* harvest. A mortgagee, who, while in receipt of all his dues, should insist upon getting back his money, and putting an end to the transaction, would be thought to be acting very oppressively.

Riparian boundaries.

The custom governing the disposal of lands newly formed by river action is not uniform. Where the river Jhelam first enters this district it runs in a rocky bed and with a swift current. New lands are hardly ever formed, and though the deep stream rule or *hadd sikandri* is said to be in force, yet it is very doubtful whether any single instance can be produced in which it has been necessary to apply it. From near Duliál, where the river begins to run more tranquilly, a line of masonry pillars forms the boundary between British and Jamu territory. Everything on this side of the line is measured in some village or Government Bela. And thus the system of *wár*

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Riparian boundaries.

pár or fixed boundaries may be said to be in force. At Bela Tuliála in the Gujrat district—opposite to Langarpur in tahsíl Jhelam—the line of boundary pillars comes to an end. Hence down the river to the lower boundary of Changas in the Gujrat district, the deep stream rule of *hadd sikandri* is the only custom. This lower boundary of Changas is very nearly identical with the upper boundary of Dárápur in this district. Thus for all practical purposes the bed of the Bunhá torrent may be taken as marking the extreme limit of the *hadd sikandri* custom. All the villages below this point are under the rule of *wár pár* or fixed boundaries. Mr. Thomson writes :—

"I doubt very much whether the villages concerned would ever agree *unanimously* to set aside the ***hadd sikandri*** custom. It would, however, be much better abolished. There can, I think, be no doubt that the strict custom requires the cession of all lands which change their bank, whether they be identifiable or not, but about these identifiable lands there is usually a bitter quarrel. The general working of the custom, too, is apt to be wasteful and inequitable."

Poverty or wealth of the proprietors.

Table No. XXXII gives statistics of sales and mortgages of land; Tables Nos. XXXIII and XXXIIIA show the operations of the Registration Department; and Table No. XXXIX the extent of civil litigation. But the statistics of transfers of land are exceedingly imperfect; the prices quoted are very generally fictitious; and any figures which we possess afford but little real indication of the economical position of the landholders of the district. The subject is discussed at some length at pages 471*ff* of the Famine Report of 1879, where actual figures are given for instances selected as typical. In forwarding these figures, the District Officer wrote as follows :—

"As regards the economic condition of agriculturists in this district, there is no very broad distinction between owners, occupancy tenants, and tenants-at-will. For the first ten years after annexation the condition of all classes improved greatly; the harvests were nearly always good, cultivation was increasing, and they bought cattle and jewels, and fed and clothed themselves much better than they had previously done. Bye and bye the crops began to grow poorer on the new lands and some bad seasons occurred. The first Settlement expired, and the people were called upon to pay revenue on the lands newly cultivated. It also became difficult for them to keep cattle, for they had broken up their own waste lands, and the larger wastes had been formed into Government preserves. So the owners and occupancy tenants gradually got into debt. The tenants-at-will who buy a share of the produce pilfer a good deal from the crop before it is divided; and they are commonly village craftsmen, adding from their trade earnings to the receipts from their land. The average annual income and expenditure of an agricultural family of four persons may be thus stated :—

	Rs.	A.	P.
INCOME—			
By articles of food	53	0	0
Other sources	12	0	0
	65	0	0
EXPENDITURE—			
Revenue and Cesses	10	12	3
Wages	1	8	0
Purchase of necessaries not produced on the land	3	0	0
	15	4	3

Chapter III, D.

Village Communities and Tenures.

Poverty or wealth of the proprietors.

"The house will be worth Rs. 20 to Rs. 70, and the family will possess four kine, three sheep or goats, jewels worth Rs. 35, and furniture worth Rs. 15.

"The agriculturists give all their grain to the *banyas* at harvest time. It is the custom to charge two annas in the rupee for lending money. Thus when a man gives a bond for Rs. 100 he only receives Rs. 87-8. He is then charged interest on the Rs. 100 at two annas (12½ per cent.) per harvest; the unpaid interest being added at each harvest to the principal. Thus a man who borrows Rs 87-8 will in three years owe Rs. 227-13, and in six years, Rs. 460-11. The old custom was not to balance the account every harvest, but only when the debtor wished to settle it, or other special occasion arose; and for the oldest account not more than 50 per cent. was charged as interest if cash was paid, or 100 per cent. if settled by paying in grain or cattle. Moreover, both debtors and creditors are equally careless, the one in borrowing and the other in lending. A cultivator with a small holding used not to be able to borrow more than Rs. 20. Now he can run into debt up to Rs. 100 or Rs. 200. Another reason is that, in the old days, land could not be sold at all; whereas it now fetches a large sum."

The Jhelam peasantry are said by those who know them best to be, on the whole, in a prosperous condition. The only poverty is such as results from excessive sub-division of the land. It is estimated (and the estimate appears to be more reasonable than that given above) that the average expenditure of an ordinary cultivator in fair circumstances upon the subsistence of himself and his family is about Rs. 8 per month, an expense that a holding of 15 acres will easily enable him to bear. The ordinary expenditure of a shopkeeper is somewhat more, and averages probably Rs. 12 per month. Some of the headmen, or *maliks*, of the Awáns in Talagang, and the family of the Chaudri of Dhanni possess large estates. It is true they had no law of primogeniture, but they used to keep their land undivided by fighting among themselves, till only one was left. In Dhanni and Talagang there are accordingly still some landowners left with large estates paying a yearly revenue of Rs. 1,000, but these are the exception, and constant sub-division under the peaceful British rule will soon reduce them to a level with their neighbours.

Debt certainly is not so prevalent in Jhelam as elsewhere. The peasantry generally are free from debt. The assessment is very light, and it it only in cases of recklessness and gross extravagance that a cultivator falls hopelessly into the hands of his money-lender. In mortgages, it is not unfrequent to stipulate for payment in grain. In these cases usually the cultivator retains possession, making over one-third or one-fourth of the produce, as the case may be, in lieu of interest, and the profits of the money-lender on this system often amount to as much as 50 per cent. Loans are chiefly in the hands of the village shopkeepers. Except in Pind Dádan Khán there are no bankers of any great wealth.

Average size of holdings.

The district is throughout one of small holdings. The average cultivated area of holdings in each Assessment Circle is shown in the table on the next page.

It will be observed that in Dhanni and Talagang, and the drier tracts (Thal and Phapra) of the Pind Dádan Khán tahsíl, the holdings are much larger than elsewhere, the population being less dense, and the agriculture rougher. The average size of the tenant s holdings appears smaller than it really is, for a tenant

Chapter III, D.

Village Communities and Tenures.

Average size of holdings.

frequently holds land under more than one owner, or owns a holding of his own, and cultivates as a tenant part of another owner's holding.

1	2	3	4	5	6	7
Tahsil.	Circle.	Average cultivated area (acres) of the holdings of				
			Tenants.			
			Paying in cash.		Paying in kind.	
		Owners.	Hereditary.	Tenants-at-will.	Hereditary.	Tenants-at-will.
Jhelam	River Bank ...	14	3	1	4	2
	Maidan ...	14	3	1	6	2
	Khuddar ...	13	3	2	1	2
	Pabbi ...	12	4	2	2	2
Chakwal	Lundi Patti ...	13	5	2	5	2
	Dhanni ...	27	6	3	6	3
Talagang	Talagang ...	32	12	9	15	8
Pind Dadan Khan	Hill Circle ...	12	4	2	5	4
	Thal ...	24	7	4	7	4
	Phapra ...	20	4	1	2	3
	River Bank ...	15	3	2	4	4

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

SECTION A.—AGRICULTURE AND ARBORICULTURE.

Chapter IV, A.

Agriculture and Arboriculture.

General statistics of agriculture.

Table No. XIV gives general figures for cultivation and irrigation, and for Government waste land; while the rainfall is shown in Tables Nos. III and IIIA and B. Table No. XVII shows statistics of Government estates, and Table No. XVIII of forests. Table No. XX gives the areas under the principal staples, and Table No. XXI the average yield of each. Statistics of live stock will be found in Table No. XXII. Further statistics are given under their various headings in the subsequent paragraphs of this Chapter. Land tenures, tenants, and rent, and the employment of field labour have already been noticed in Chapter III Section D.

Soils.

The principal soils of the district may be described as follows: The Table on the next page shows the area of each as ascertained at the recent Settlement. The circles shown in the second column are the Assessment Circles described in Chapter V Section B.

Hail.

Hail is roughly used of all lands which receive manure, but such lands were until lately mainly situate in the immediate vicinity of the village site, where they were thoroughly well levelled, and, owing to their vicinity to the homestead, husbanded in every way better than any other lands; usually receiving valuable fertilising drainage from the village site, and being by reason of their high culture and good levelling in the best condition for retaining moisture. In tahsíl Talagang, where manure is not valued or much used, the term *hail* is that by which the class of soils next following is commonly described.

Mal, las, chach, &c.

Next follows a class of soils which has numerous designations; the most common being *mal, las, cho, ban, gundi, chach.* Their common characteristics are that they are deep loamy soils, well levelled and favourably situated both for receiving and retaining moisture. In some places, as in the Pind Dádan Khán hills and the old *mal* and *las* circles of tahsíls Chakwál and in the Khuddar and Pabbi of tahsíl Jhelam, this last advantage is due to the industry with which they have been embanked; in others, as in the alluvial lands on the banks of the large ravines, and in the old circles of *gholar* (Jhelam) and *chach* and *babiál* (Chakwál), it is natural to their situation and constituents. The faults in dry seasons, and advantages in rainy years, of the *gholar*, *chach* and *babiál* soils are due to the greater preponderance of clay in those soils; but whatever the varieties in the soils thus grouped together, they are, by reason mainly of their superior facilities for catching and holding the rainfall and drainage of the country, more fertile than the ordinary lands, and the majority of them will yield a fair crop even in poor seasons.

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Agriculture and Arboriculture.

Maira, rakkar.

Next follow the ordinary lands of the country, which are usually sandy loams, sometimes level, and sometimes sloping; in some places, of great depth, in others with a substratum of rock (usually sandstone but in the Salt Range limestone) not far from the surface. In the hill tracts and at the foot of the hills such lands are not unfrequently much cumbered with stones, though these do little harm beyond making the ploughing difficult. The agriculturists describe the better class of these lands as *maira*, and the worse as *rakkar*. There is no real standard of distinction between *maira* and *rakkar*. Each village will describe its worst soils (and sometimes all its lands) as *rakkar*; and thus a good village will describe as *rakkar*, soil which, if situate in a poorer village, would have have been better than the *maira* of that village.

Statement showing soils and irrigation in acres, as ascertained at the recent Settlement.

Tahsil.	Circle.	Dry Soils.				Wet Soils.	
		Manured.	Mal, Las, Hitar, &c.	Maira, Rakkar, &c.	Total.	Inundated.	Well irrigated.
Jhelam ...	River Bank ...	3,199	1,305	16,971	21,475	6,575	748
	Maidan ...	7,322	6,227	49,872	63,421		1,000
	Khuddar ...	8,485	1,696	45,802	55,983	197	377
	Pabbi ...	4,153	696	23,546	28,395		46
	Total ...	23,159	9,924	136,191	169,174	6,772	2,180
Chakwal ...	Lundi Patti .	3,805	4,622	42,055	50,482	...	477
	Dhanni ...	9,143	41,950	188,560	239,653	504	2,674
	Total ...	12,948	46,572	230,615	290,185	504	3,151
Talagang ...	Talagang ...	3,498	25,242	229,637	258,377	3	2,607
Pind Dadan Khan ...	Hill Circle ...	3,238	34,326	16,897	54,461		876
	Thal ..	448	38,348	7,665	46,461	1,307	625
	Phapra ...	422	12,339	2,536	15,297	..	163
	River Bank ...	320	6,148	14,700	11,168	17,613	17,329
	Total ...	4,428	91,161	41,798	137,387	18,920	18,993
	Total district ...	44,033	172,899	638,241	855 173	26,199	26,931

Irrigation.

The following figures show the percentages of inundated, irrigated, and dry cultivation. Further statistics regarding wells will be found in the description of the system of agriculture pursued on irrigated lands given below at pages 97-106.

Tract.	Per cent. of Cultivated Area.		
	Irrigated.	Sailab.	Barani.
River Bank Circle, Tahsil Jhelam ...	2·6	22·8	74·6
Do. Tahsil Pind Dadan Khan ...	30·9	31 4	37·7
Rest of Tahsil Jhelam ...	1·0	0 1	98·9
Do. Tahsil Pind Dadan Khan ...	1·4	1·1	97·5
Tahsil Chakwal ...	1·1	0·2	98·7
Do. Talagang ...	1·0	...	99·0
Total district ...	3·0	2·9	94·1

Chapter IV, A.

Agriculture and Arboriculture.

Extension of cultivation and reclamation of waste land.

With regard to the method in which land apparently almost or altogether unculturable is brought under cultivation by the people, Major Wace makes the following interesting remarks while discussing the increase of cultivation during the period of the Regular Settlement :—

"The previous Settlement Officer in his report recorded his opinion that there was no real culturable waste left in the District, and my own opinion agrees very much with what I have no doubt that officer really meant. In the River Bank Circles and in the Maidan Circle of tahsíl Jhelam, there is little land easily culturable which is not already cultivated ; and the agriculturists feel the necessity of reserving some little land for the grazing of their cattle. In the Thal and Phapra Circles there has already been a very considerable extension of cultivation, and as cultivation in these circles to be of any value must be supplied from the hill floods, it is obvious that, though I may believe that the quiet industry of the people will go on steadily reclaiming land, it is not safe to assume as likely any immediate increase of cultivation.

"Again in tahsíl Talagang we have just had a very heavy increase in cultivation, not supported by an equal increase in cattle and population. Though the increase in these is considerable, still the ploughs are far larger* than in the rest of the district, and the cultivation rougher. Lastly, the method by which cultivation is now extending in the west half of tahsíl Jhelam, in tahsíl Chakwál and Talagang, and in the hill circle of tahsíl Pind Dádan Khán, and in which it has been extending during the past 15 years, is peculiar to this part of the Punjab. These portions of the district are elevated plateaux intersected by ravines. The ravines cut back in countless little branches into the plateaux and the lands reclaimed are largely those which form the beds and sides of these little ravines, or the sloping lands which lie at the foot of the low ranges of hills. These lands are correctly described as unculturable in their natural state. They are rendered culturable by a laborious process of levelling down and banking up. They were originally for the most part recorded as village common ; but since the Regular Settlement was made, there have been continual partitions of them all over the country. And when partitioned, the owners reclaim them, not by an expenditure of capital, but by steady industry. The upper banks are broken down, the lower ends of the slopes are banked up, and the beds are dammed. Every means is adopted to level inequalities, and to prevent the rains from washing away the soil that is broken down. Occasionally down comes heavy rain, and breaks the lower slopes and dams on which so much pains have been spent and washes away a great quantity of valuable soil: and the cultivators have to do almost half their work of reclaiming and levelling over again. And so they have worked on perseveringly and unweariedly for the last 15 years ; till, when the new measurements come, and we add up the total area cultivated, we are astonished at the gross amount of land that has been reclaimed, and wonder how the previous Settlement Officer can have so short estimated the prospects of extended cultivation. Well so far so good ; only let us take care how we assess this new cultivation. A great portion of it is in a very unformed state ; and if we put too much revenue on it, the people will lose heart and throw it up. Treat it lightly, and they will not feel its assessment ; and will go on as before steadily reclaiming unculturable land, till very likely, 30 years hence the Settlement Officer of the day will wonder how it came about that I repeated my predecessor's short estimate, and returned so much land as unculturable. In other districts the land returned as culturable is land which any one would be glad to have ; but that reclaimed in this district is stuff which no ordinary outsider would think worth asking for : but the resident cultivators break it down, level it, and embank it, year by year, till in course of time the new lands are as fine as, and sometimes finer than, the old."

* Note.—The average size of a plough in each tahsíl is—

Jhelam ...	...	... 9 acres.
Pind Dádan Khán	...	... 10 "
Chakwál	...	... 14 "
Talagang	...	... 19 "

Chapter IV, A.

Agriculture and Arboriculture.

Agricultural implements and appliances.

Table No. XXII shows the number of cattle, carts, and ploughs in each tahsíl of the district as returned in 1878-79. The agricultural instruments of the district are of the usual type and have been described very often. The principal are the *hal* or plough; the *panjáli* or yoke; the *náli* or drill; the *sohága* or harrow, which is called *maira* in the west; the *tringal* or pitchfork; the *karáh*, which has been already noted; the *khurpa dátri* and *kahi*, which merely require mention; the *kuhári* or axe, which is the implement most used for murders; the *phala* or thresher; the *jandra* or rake; and the *sánga* or two-pronged fork for hedge building. Every little peg or string about these instruments has in general a separate name; but nothing is gained by accumulating a crowd of words that are hardly ever used, and can hardly ever be remembered. The principal pieces of the plough are as under, *viz.*, the *jhangi* or upright, on to which the handle called *hathi* is fastened; the *kur* or horizontal tongue, which is shod with the *phála* or share. The long inclined piece, which carries the yoke or *panjáli*, is itself divided into three separate pieces which are spliced together with string, under which small wedges are driven in order to keep everything tight. The names of these three separate pieces are—(1) the *sanha*, which carries the yoke; (2) the *bachi* in the middle; (3) the *hal* proper, which is slipped into the *kur*, and secured in front by a small iron plate with a nail and behind by a wooden wedge driven in tight. The yoke is attached to the *sanha* and prevented from slipping forward or backward by an arrangement with a wooden peg and a piece of leather rope, which are called *kili* and *nári* respectively. Ploughs in this district last about three years. They are made of *phulahi* wood for choice, and failing that, of *shísham* or wild olive. The latter two woods, however, are said to cause pimples or blisters in the hands of the ploughmen.

Manure, and ploughing, and rotation of crops.

In a return made in 1879 for the Famine Report it was stated that 34 per cent of the irrigated cultivation was constantly, 43 per cent. occasionally, and 23 per cent. never manured, and that the corresponding figures for unirrigated land were 5, 5, and 90. Three hundred maunds of manure is considered a fair dressing for land constantly, and 120 maunds (often given in alternate years) for land occasionally manured.

The usual course of cropping is to take a crop of *bájra* after one of wheat or barley, and then to leave the land for a year. One good ploughing is sufficient after the spring crop is cut, but in the interval of a year between the removal of the *kharif* crop and the time when a *rabi* crop is sown, the land is ploughed up several times, according to the quality of the soil and the inclination and opportunity of the cultivator. Thus light sandy soils require less ploughing than stiff clays; four ploughings sufficing for the former, while the latter may be ploughed ten times with advantage. Rotation of crops is not understood or practised, and there is no difference in this respect between irrigated and unirrigated land. Owing to the peculiar circumstances of the well tract, land which can be constantly manured

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Agriculture and Arboriculture.

is not rested. Full details regarding manure and rotation in unirrigated land are given below at pages 100—107.

System of agriculture.

Rough and simple as the agriculture of the district may appear at first sight, neither its skill nor its thrift is to be despised; and Major Wace believes that both are steadily increasing, and are now at a considerably higher standard than that of 25 years ago. The general standard of cultivation is highest in the Jhelam and Pind Dádan tahsíls; Chakwál follows next; and Talagang comes last. The system followed differs according as the land is well-irrigated (*cháhi*), inundated (*sailáb*), or dry (*báráni*). Each system will be separately described in the following pages, and figures given for the areas under the several staples in each sort of cultivation as ascertained at the recent Settlement.

Sailáb system of cultivation.

The first statement on the next page shows the crops grown on *sailáb* lands during the year of Settlement measurements (1875-76).

The small areas returned as *sailáb* in tahsíls Talagang and Chakwál, and in parts of tahsíl Jhelam other than the River Bank Circle, are stray lands on the banks of the Sohán, Bunhá, and Kahán torrents; and on these the system of cultivation is the same as that of the *báráni* described below. The *sailáb* lands proper are the alluvial lands on the immediate banks and in the bed of the Jhelam river, included in the River Bank Circles of tahsíls Jhelam and Pind Dádan Khán; there are also some 1,300 acres of such land belonging to the Thal villages. *Sailáb* lands are almost entirely cultivated with wheat year after year. A little barley is grown on the poorer lands: and on those lands least exposed to the action of the autumn floods some *bájra* and *chari*. But on the real *sailáb* lands nothing but a *rabí* crop is possible owing to the summer inundations. On half-formed ground coarse rice and *sowak* is shown, but the area so treated is scarcely worth notice. Also on such lands, if barley and rice are sown together in October, the rice will not germinate till the river rises again the following summer; but this also is mere catch-cropping, and the rice so grown is coarse and poor. In short the system on these *sailáb* lands is to take one *rabí* crop each year—which crop is usually wheat. Some of the wheat crops thus grown are very fine; but others, especially in rainy seasons, are poor and short. And such land is often much choked with thistles and other weeds. *Sailáb* land is not usually manured, and owing to its situation between branches of the river, and liability to floods, it cannot receive the frequent ploughings by which the condition of the *baráni* land is so much improved; nor indeed does it need such ploughings except to clear the land of weeds.

The second statement on the next page shows the crops grown on *cháhí* lands during the year of Settlement measurements 1875, 1876.

Cháhi system of the district, the Pind Dádan Khán tahsíl excepted.

With a few exceptions noted below, the irrigation is entirely from wells. The system of cultivation followed on these lands in the Pind Dádan Khán tahsíl and in the rest of the district differs. That tahsíl excepted, the wells of the district irrigate very small areas. On the banks of the ravines which drain the Jhelam, Chakwál and Talagang tahsíls, are commonly found low-lying strips of alluvial land in which wells can be sunk at little cost; similar wells are also

Chapter IV, A.
Agriculture and Arboriculture.
Sailáb and Cháhi systems of cultivation.

Sailáb system of cultivation.

Sailáb Areas.	Rabi. Wheat.	Rabi. Barley.	Rabi. Alsi.	Rabi. Masur.	Rabi. Tára míra.	Rabi. Others.	Rabi. Total.	Kharif. Bájra.	Kharif. Mung, Moth, Másh.	Kharif. Maize.	Kharif. Jowár, chari.	Kharif. Cotton.	Kharif. Rice.	Kharif. Others.	Kharif. Total.	Total area cropped.	Total Sailáb area.	Area twice cropped.
River Bank, Jhelam ...	4,331	807	90	23	97	4	5,352	521	251	176	33	99	97	47	1,224	6,576	6,576	1
River Bank, Pind Dádan Khán	13,966	629	116	262	188	237	15,398	795	49	100	915	270	54	171	2,354	17,752	17,613	139
TOTAL ...	18,297	1,436	206	285	285	241	20,750	1,316	300	276	948	369	151	218	3,578	24,328	24,188	140
Rest of tahsíl Jhelam ...	86	15	...	...	5	......	106	17	72	......	1	1	......	......	91	197	197	...
Rest of tahsíl Pind Dádan Khán	1,152	63	1	34	3	16	1,269	1	......	......	29	2	35	......	67	1,336	1,307	29
Tahsíl Chakwál	288	41	...	...	......	......	329	172	......	......	......	3	......	......	175	504	504	...
Tahsíl Talagang	1	......	...	...	......	......	1	1	......	......	......	1	......	......	2	3	3	...

Cháhi system of cultivation.

Irrigated areas in Tahsíl	Rabi. Wheat.	Rabi. Barley.	Rabi. Mustard.	Rabi. Tobacco.	Rabi. Turnips.	Rabi. Tarkári.	Rabi. Others.	Rabi. Total.	Kharif. Bajra.	Kharif. Maize.	Kharif. Jowár, chari.	Kharif. Cotton.	Kharif. Sugarcane.	Kharif. Tarkári.	Kharif. Others.	Kharif. Total.	Total area of both crops.	Cultivated area.	Area twice cropped.
Jhelam	1,145	146	108	242	......	306	70	2,017	728	435	170	151	75	286	16	1,861	3,878	2,188	1,698
Chakwál	1,471	1,081	11	293	......	281	14	3,551	1,021	221	20	1,518	4	340	27	3,151	6,302	3,151	3,151
Talagang	1,475	1,051	8	9	......	42	25	2,610	1,275	154	19	1,120	1	27	...	2,596	5.206	2,607	2,599
Pind Dádan Khán Hills ...	611	24	...	...	......	32	69	736	131	301	7	47	9	11	6	512	1,248	876	372
Pind Dádan Khán Plain ...	15,014	918	44	66	1,203	497	454	18,196	1,705	288	1,178	1,919	352	113	110	5,665	23,861	18,117	5,744
Total ...	19,709	3,220	171	610	1,203	1,158	632	26,710	4,860	1,399	1,394	4,755	441	777	159	13,785	40,495	26,931	13,564

Chapter IV, A.

Agriculture and Arboriculture.

Cháhi system of the district, the Pind Dádan Khán tahsil excepted.

sunk on the frontage of the Jhelam river between the bed of the Bunhá and the Jhelam town; and there are a few in the plain round Jhelam. Some of the best are at Domeli, and at Rotás on the Kahán, in the Kotian Kas at and near Badshaháni; round Dalla (tahsíl Chakwál) and Jabbi (tahsíl Talagang) on the banks of the Sohan; and on the Ankar at Taman (tahsíl Talagang). Though these wells are small and poorly equipped in cattle as compared with the wells of the Panjáb, the lands irrigated by them yield steadily two crops a year; except in the river bank and plain circles of tahsíl Jhelam, where the double cropping is not so steady, but even here it extends to more than two-thirds of the irrigated land. The principal crops are (as shown in the above statement) wheat, barley, vegetables, and tobacco in the *rabí;* and , *bájra*, maize cotton and vegetables, in the *kharíf.* These lands are all well manured; and they are for the most part in the hands of Malliárs, the most industrious agriculturists in the district. On the other hand, some of the wells—especially those in tahsíl Talagang—are poor, and those of later construction are not (like the old ones) always in the hands of Malliárs, but have in many instances been sunk by ordinary agriculturists who are less able to make them profitable. The irrigated area in such cases is usually an extremely small fraction of the whole. The following table throws light on these remarks:—

Tahsíl.	Circle.	Acres irrigated.	Per cent. of cultivated area irrigated.	Average per Well.			
				Acres irrigated.	Cost.	Depth to surface of water.	Oxen.
					Rs.	Ft.	No
Jhelam	River Bank ...	748	2·6	4	250	20	6
	Maidán ...	1,009	1·5	4	300	17	6
	Khuddar ...	377	7	2	150	15	6
	Pabbi ...	46	·2	1	200	14	6
	Total tahsíl Jhelam ...	2,180	1·2	3	225	16	6
Chakwál.	Lundi Patti ...	477	·9	2	200	16	4
	Dhanni ...	2,674	1·1	3	225	18	4
	Total tahsíl Chakwál ...	3,151	1·1	3	213	17	4
Talagang.	Tahsíl ...	2,607	1·0	4	176	17	7

Irrigation in the Pind Dádan Khán hills.

In the Pind Dadán Khán hills 876 acres are irrigated, *viz.*, 178 by wells, principally at Wagh, of the same character as those above described; and 698 acres by springs.

The largest areas are at—

Choya Saidan Sháh	...	... 168 acres.
Chumbi ...	...	... 126 "
Dheri Jába ...	...	... 90 "
Khajurla ...	...	... 42 "
Jotána ...	...	... 168 "

About one-third of the land irrigated from springs is returned as bearing two crops a year. Some of the cultivation is rich, as at Choya Saidan Sháh and at Kallar Kahár (now in the Chakwál tahsíl) but its value varies with the supply of water and the character of

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the cultivators. The cropping is very similar to that on the well lands previously described.

Well irrigation in the Pind Dádan Khán plain.

The well irrigation in the Pind Dádan Khán plain is confined to the River Bank Circle, and to the lands in the Thal and Phapra Circles immediately adjoining. The average area irrigated per well is 16 acres, depth to water 15 feet, cost per well Rs. 200. Thirty-one per cent. of the River Bank Circle is thus irrigated. All the available manure is given to the well land, and about one-third of the irrigated area is manured. The land so treated is usually that nearest the well. The system of cultivation is to reserve a small plot for sugarcane; an acre or so for turnips; one or two acres for cotton; and to sow the rest with wheat. After the wheat has been harvested, a limited area (which from the figures above given seems to average a third of the whole) is resown with maize, *bájra*, and *chari*. Thus the whole area bears one good crop, and about one-third, which is manured, bears a second crop. The cultivators look for their profits principally to the wheat crop. Some of the sugarcane is pressed and some given to the cattle. It is of poor quality. The turnips are grown for cattle fodder; and the *bájra*, maize, and *chari* for the most part serve the same purpose.

Circle.	Acres irrigated.
River Bank ...	17,329
Thal ...	625
Phapra ...	163

System of cultivation on the *báráni* lands.

It remains to describe the system of agriculture on the *báráni* lands, and how large a proportion of the cultivated area is included in this description will appear from the table on the next page.

The prevailing systems of cultivation are two :—

(1) a two-year course which rests each acre for a year, and then takes two crops the year following. This prevails in tahsíl Jhelam, and nearly all tahsíls Chakwál and Pind Dádan Khán.

(2) a system under which the *rabí* and *kharíf* lands are separate, and are each cropped once a year. This prevails in tahsíl Talagang, and in a few villages at the north-west corner of tahsíl Chakwál.

System of *báráni* cultivation in tahsíl Jhelam, Chakwál and Pind Dádan Khán hills.

The two-year course on the *báráni* lands of tahsíls Jhelam, Chakwál, and Pind Dádan Khán is as under. The *kharíf* crop having been harvested at the beginning of November, the land lies over for two months until the *loi* holiday, 1st Mágh (equal to 12th January), shortly before which the land has usually received a good fall of rain. From this date the cultivator ploughs and reploughs the land, as often as he has leisure, inclination, and opportunity, for nearly nine months to the end of September. Land under this treatment is spoken of as *warihál*. In the Jhelam and Pind Dádan Khán tahsíls, and in the Lundi Patti of tahsíl Chakwál, land is usually ploughed over eight or ten times during this period; in Dhanni about four or five times. The process completely clears the land of weeds, and in the better cultivated tracts brings it to a fine condition of tilth. From the end of September *rabí* sowings commence. When the *rabí* crops have been cleared in May (the land is then termed *nárka*), the first opportunity is taken to plough the land over two or three times, and then a *kharíf* crop is sown. Under this course, if regularly carried

System of cultivation on the *báráni* land.

The crops cultivated in the year of measurements were as follows :—

Tahsíl.	Circle.	Rabi							Kharif.						Total area under crop.	Area of cultivation.	Area twice cropped.
		Wheat.	Barley.	Gram.	Mustard.	Tára míra.	Others.	Total.	Bájra.	Mung, moth, másh.	Chari, jowár.	Cotton.	Others.	Total.			
Jhelam.	River Bank	10.951	606	105	82	774	499	13,017	4,803	3,381	735	277	329	9,525	22,542	21,475	1,067
	Maidán	28,740	981	162	786	3,936	890	35.495	16,749	10,048	1,757	765	68	29,387	64 882	63,421	1,461
	Khuddar	25,886	426	86	150	5,172	130	31,850	17,543	6,050	183	1,637	67	25,480	57,330	55,983	1.347
	Pabbi	13,936	425	359	261	2,284	31	17,296	8,509	3,063	196	712	4	12,484	29.780	28,395	1,385
Chakwál.	Lundi Patti	28,473	740	750	575	3,025	63	33,626	16,045	2,023	343	1,378	12	19,801	53,427	50,482	2,945
	Dhanni	143.219	5,079	9,950	2,521	17,832	209	178.810	45 091	13,862	5,739	5,150	81	69,923	248,733	239,653	9,080
Talagang.	Talagang	164,079	1,317	19,329	1,886	15,287	39	201,937	42,086	2,977	5,747	8,642	70	59,522	261,459	258,377	3,082
Pind Dádan Khán.	Hill Circle	35,000	980	796	135	2,290	23	39,224	18,141	803	374	455	183	19,956	59,180	54,461	4,719
	Thal	23,889	495	13	2	2,109	20	26,528	11,742	1.029	5.259	2,102	58	20,190	46,718	46,461	257
	Phapra	9,910	139	24	2	504	4	10.583	3,075	165	1,623	2,073	2	5.138	15,721	15,297	424
	River Bank	13,463	557	74	...	874	111	15,079	4,100	280	1,964	339	116	6,799	21,878	21,168	710
	Total tahsíl Jhelam	79,513	2,438	712	1,279	12,166	1,550	97,658	47,604	22,542	2,871	3,391	468	76,876	174,534	169,274	5,260
	Total tahsíl Chakwál ...	171,692	5,819	10,700	3,096	20,857	272	212,436	61,136	5,885	6,082	6,528	93	89,724	302,160	290,135	12,025
	Total tahsíl Talagang ...	164,079	1,317	19,329	1,886	15,28 7	39	201,937	42,086	2,977	5,747	8,642	70	59,522	261,459	258,377	3,082
	Total tahsíl P. D. Khán ...	82,262	2,171	907	139	5,777	158	91,414	37,058	2,277	9,220	3,169	359	52,083	143,497	137,387	6,110
	TOTAL DISTRICT ...	497,546	11,745	31,648	6,400	54,087	2,019	603,445	187,884	43,681	23,920	21,730	990	278,205	881,650	855,173	26,477

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System of *báráni* cultivation in tahsíls Jhelam, Chakwál and Pind Dádan Khán hills.

out, an agriculturist will in each year take a *rabí* and *kharíf* crop, from half his cultivated land, the other half being at rest under ploughing. That is to say, he gets one crop per annum per acre cultivated; but the course of cultivation is so arranged that each acre rests every other year. The system is extremely well suited both to the climate and to the circumstances of the people; and the nine months' rest and ploughing which each acre gets every other year must go very far towards supplying the place of manure; for the ploughing, besides completely clearing the land of weeds, by pulverising the soil and by exposing it freely to the action of damp and of the atmosphere, accelerates the decay of insoluble matter and its conversion into plant food; so that land treated in this way for nine months probably gains as much good as if it were left for twice the time in unploughed fallow.

Variation from this course.

This is the system as it is followed by the best cultivators. But if the statement of *báráni* crops above given is referred to, it will be seen that the area of the *kharíf* crops does not equal that of the *rabí* crops, but that in the three tahsíls concerned the crops are recorded in the proportions given in the margin.

Tahsíls.	No. of acres *kharíf* for every 10 acres *Rabí*
Jhelam	9
Pind Dádan Khán ...	6
Chakwál	4½

In a limited area in the Thal (Pind Dádan Khán) close under the Salt Range little else beside *kharíf* crops (*bájra*) are grown. But in respect of all other *báráni* lands returned in these tahsíls as under *kharíf* crops it is safe to assume that a *rabí* crop preceded the *kharif*. So, speaking roughly, in Jhelam the full agricultural course is well carried out, but in the Pind Dádan Khán tahsíl a third of the land cropped each year yields no *kharíf* crop, and in Chakwál a half. The main reason of this is the shorter rainfall of these two tahsíls. The shorter the rainfall the greater the difficulty in raising *kharíf* crops on the lighter soils. In the Chakwál tahsíl especially there is a great deal of light soil. And zamindárs, contending annually with difficulties of this sort, learn to limit or expand the *kharíf* sowings of each year according to the opening promise of the season. On the other hand, there is of course a certain amount of carelessness and bad cultivation; and occasionally attempts are made to grow the more valuable wheat crops, year after year, by omitting the *kharíf* (as is commonly done on the *báráni* lands of the River Bank Circle of tahsíl Pind Dádan Khán). But these are minor points. The main cause is that in proportion as the *kháríf* rainfall is short, the lands suited for *kharíf* crops will be limited by the exclusion of the lighter soils, and by the selection of those of a more loamy character and which receive drainage from lands lying above them. This is the same lesson as is indicated by the agricultural system of the Talagang tahsíl which will now be described.

The other system under which the *rabí* and *kharíf* lands are separate, and are usually each cropped once a year, prevails in tahsíl Talagang and in a few villages of the Bubiál and Chach *ílákas* in

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System of *báráni* cultivation in tahsíl Talagang and a few villages in the west of Chakwál.

the west of the Chakwál tahsíl. In these tracts the higher and sandy lands are reserved for the *rabi*, and the lower and more loamy land for the *kharíf*. The country between Láwa, Taman, and Talagang lies on broad gentle undulations, the crests of which are light sandy soil, and the hollows more or less loamy. In long course of time much of the clay in the higher lands has been washed down into the lower. On the sandier soil the autumn rains are not sufficient for the growth of *kharíf* crops; but they are sufficient on the loamy soils which are richer in clay and therefore more retentive in moisture, and which also receive the drainage of the higher fields.* The people, therefore, cultivate the latter with *kharíf* crops, and succeed in getting very fair *rabí* crops off the higher and sandier soils by aid of the winter rains. The *rabí* lands are four or five times the extent of the *kharíf* lands. Neither *rabí* nor *kharíf* lands get more than three or four ploughings before being sown; sometimes less.

Budhi system on *kharif* lands in tahsíl Talagang.

Where the holdings of the cultivators are large, as in the Bubiál villages of tahsíl Chakwál, and in Láwa and other parts of Talagang, it is a common thing to find that a part of the *kharíf* lands has been thrown out of cultivation as *budhi* or old. In these places the *kharíf* cultivation is rough, the land is not sufficiently ploughed, and so after three successive *kharíf* crops becomes a good deal choked with weeds. The cultivator under such circumstances will keep only half his *kharíf* lands under cultivation and the other half fallow; changing the two halves after every three years. The drainage of the half left fallow is carefully conducted by little surface channels on to the portion under cultivation. It is doubtful how far this practice is really necessary; it certainly has the advantage of giving to such crops as are grown a larger share of the rainfall than they would otherwise receive; and it seems to be principally resorted to where the holdings are large and the cultivation rough. It is not practised in the better cultivated villages of the Talagang tahsíl: though as regards soil and rainfall these are similarly circumstanced to those in which the *budhi* system prevails. The highest proportion of *budhi* lands is found in Bubiál and Láwa. In the majority of the villages of the tahsíl where the custom exists, the *budhi* land does not exceed one-third of the *kharíf* area.

Cotton cultivation.

Cotton cultivation, owing to the length of time during which this crop occupies the ground, necessarily where it occurs creates a diversion from the ordinary course of husbandry. It is sown in March, and the pickings last from October to the end of December, so that a *rabí* crop can neither immediately precede it nor immediately follow it. On the *báráni* lands of tahsíl Jhelam and Lundi Patti, the plants after the first year's pickings are cut off short close to the ground; and they sprout again in the spring following, yielding a second crop generally better than that of the first year. In Dhanni, Talagang, and the Pind Dádan Khán plain, the plants are similarly cut back a second time, and a third year's crop taken, but this is always

* The catchment area for water which is attached to any field is looked upon as a matter of great importance throughout the west of the district. It is called the the *ror pani*, and when it is large the field below is nearly always highly classed.

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poor. In the Pind Dádan Khán hills very little cotton is grown, as their more temperate climate does not suit this crop; so much as is grown is ploughed up after the first year's pickings. Cotton cultivated on well lands stands for two years in tahsíls Jhelam and Pind Dádan Khán, but for only one year in the rest of the district. It is not usual to take any special care to sow cotton on superior land.

Manuring and double crops on unirrigated land (*baráni*)

In tahsíl Talagang manure is not usually applied to the *báráni* lands. The people say manure burns up their crops. This experience agrees with that of other countries. Professor Wrightson in his "Hand-book of Agriculture," recently published, remarks (page 114) that there is "an objection to the use of dung upon light soils in dry seasons, the dung often doing harm by leaving the land hollow and liable to be injured by drought." If this is so in wet England, *à fortiori* must it be the case in the light soils of a dry country like Talagang. In the Thal and Phapra Circles of tahsíl Pind Dádan Khán manure is little used in the *báráni* lands for similar reasons; the climate is too hot and dry. In the River Bank Circle of Pind Dádan Khán the manure is all used up on the well lands, and there is none to spare for the *báráni*. In the Hill Circle of that tahsíl, and throughout tahsíl Jhelam and Chakwál, the manure produced is applied to the best *báráni* lands. Some of the *báráni* lands thus manured are cropped twice annually. The returns on the subject are as follows:—

Tahsíl.	Circle.	*Báráni hail* acres.	Cropped twice per annum.		Remarks.
			Acres.	Per *cent* of *báráni* cultivation.	
Jhelam	River Bank	3,199	1,067	5·0	* The excess of area twice cropped over the area manured is due to exceptional richness of soil; but is not reliable.
	Maidán	7,322	1,461	2·3	
	Khuddar	8,485	1,347	2·5	
	Pabbi	4,153	1,385	4·9	
Chakwál	Lundi Patti	3,805	2,945	5·8	
	Dhanni	9,143	9,080	3·8	
Talagang	Talagang	3,498	3,082	1·2	
Pind Dádan Khán.	Hill Circle	3,238	*4,719	8.7	
	Thal	448	257	·5	
	Phapra	422	424	2·8	
	River Bank	320	*710	3·4	
	Total Tahsíl Jhelam ...	23.159	5,260	3·1	
	Total Tahsíl Chakwal ...	12.948	12 025	4·1	
	Total Tahsíl Talagang ...	3,498	3 082	1·2	
	Total T. P. D. Khán ...	4,428	6,110	4·4	
	Total District ...	44,033	26,477	3·1	

It will be seen from the above that the *báráni* area returned as bearing two crops a year is insignificant, except in the Pind Dádan Khán hills and in Dhanni. The return as regards the hills is correct; the somewhat colder climate, and the remarkably fine character of the manured lands, make it practicable to secure two crops a year principally wheat and *bájra*) from them. The Dhanni return is of doubtful accuracy, inasmuch as it equals the manured area. The climate of

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Chakwál is too hot and dry to allow of much successful continuous double cropping; at the most such lands may be described as yielding one good *rabí* crop per annum and a poor *kharíf* crop by way of fodder.

Embanked fields.

The marked features in the cultivation of Dhanni are the banks of earth on which the cultivation of this tahsíl so entirely depends, that it is necessary to explain their nature in some detail. The high banks in the Pind Dádan Khán villages are all made in an open and even plain; but in Chakwál, and between the two ranges of hills in the Jhelam tahsíl, indeed more or less in every part of the district, the ground slopes considerably. Consequently, if the fields were not banked up properly, not only would the water drain off at once and the field be left dry, but the very earth of the field would be carried off, as well as the seeds or manure therein, so that every field is carefully banked up, if the owners have men and cattle to do it. The work is heavy, and cannot be done with poor cattle, who are unable to drag the heavy plank, or *sohaga*, which is used to push the earth from the higher part to the lower. It is equally tiring to the men, and it is consequently only in villages held by well-to-do owners, or by some *chaudri* or other wealthy person, that the lands are really properly banked up. In others, some fields are banked up where the owner has *friends* or means; some are left to their natural state. These latter fields are called *ruki*—the former *mera*—and in distributing their assessment the *zamindárs* generally assess the latter at double the former. This sort of bank is common perhaps all over the district. Few villages are so level that these banks are not needed; and, though the general rule is as stated above, *viz.*, that the owner must be a man of some wealth to enable him to provide the cattle and men, yet there are some villages, where the number of persons who have to be fed and sustained from the land has driven them to bank up every available piece of land with the utmost care. These, however, are few. It requires a spirit of mutual aid to effect this; and owing to the fierce disputes about the ownership of land which marks this district, such a spirit is seldom to be met with.

The great banks or *bands* for cultivation.

Besides these banks there is a second and more important kind which is only suited to particular localities. Of course, as the rain water pours over the surface of the soil, it carries with it a large quantity of earthy sediment, which it sweeps down into the ravines which form its outlet. Where the owners are wealthy enough, they bank up the heads of these ravines, leaving an escape wherever possible. They then break down and smooth all the rough uneven ground, so as to make as large a field as they can at the bottom of the ravine. This bank then retains a great body of water, rich in earthy sediment, and, as it dries up, leaves the most fertile soil in the country. This soil is called *lus*, and is generally assessed by the villages at three to four times the amount of the *ruki*. Some of these banks are very large, and many retain a considerable quantity of moisture all the year. They require, however, both wealth and energy. When one of these is decided upon, all the best cattle are summoned from all the villages around. Men come in their holiday clothes, and for perhaps a fortnight, sometimes for a month, the work is carried on by

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The great banks or *bands* for cultivation.

different relays. Some dig up the earth on both sides, ready to be dragged off by the plank (*kurá* or *sohaga*); the others form a continuous circle of cattle going and returning, though more generally they cross the space to the other side, returning with earth from that side, and thus the bank grows apace. They are paid well: food of the best for themselves and their bullocks, and often four annas an ox extra; so that these banks often cost two or three hundred rupees; some 500 and 1,000 rupees. But these larger ones belong to former days, when the whole tahsíl was held by the great *talukdárs*, of whom more hereafter. Some of the more important ones retain enough water to produce rice crops; these are most profitable.

System of improving fields by embanking them.

This system is practised in the Khuddar and Pabbi Circles of tahsíl Jhelam, throughout tahsíl Chakwál, in parts of tahsíl Talagang, and in the Pind Dádan Khán hills; in fact, wherever the cultivated fields lie on the sloping sides of plateaux or in raviny ground. The larger style of embankment described above is not much attempted; they are too expensive and frequently break during the heavier falls of rain. Occasionally *bands*, very much larger than those put round fields, are thrown across the head of a ravine. These are almost always of stone masonry, either wholly or partially, and they are intended to form tanks and not to promote cultivation. In one or two cases they are seen furnished with substitutes for a sluice, so as to prevent too great a stress on the *band;* but, instead of these large banks, there is an almost universal system of small banks at the lower edges of those fields of which the surface was originally sloping, or which have been made in ravine land. Though these little banks do not cost much money, constant attention and much labour is spent on them by the cultivators. They are made sufficiently high to enable the cultivator to level the surface of his field, with one or two feet extra to retain the rainfall and drainage from higher lands. By their aid a very great improvement in the character of the *báráni* cultivation has taken place since annexation, and since the Regular Settlement—an improvement which is still progressing. Similarly in the Thal and Phapra Circles of the Pind Dádan Khán plain all the best fields are surrounded by small banks of about two feet high; but these banks are made not to level the field surface, but in order to retain, in sufficient quantity upon each field, the fertilising floods which come down from the Salt Range after any considerable rainfall. Without such banks the floods would run off. In making the small field bands the surface of the spot from which the earth of the band is to be taken is first thoroughly loosened. This is generally done by ploughing and cross-ploughing. The loose earth is then raked up into the band by an instrument called *karáh*, which is generally dragged by one or two bullocks, but sometimes by men. The *karáh* is simply a very large wooden pitchfork with spreading prongs connected together by an interlacement of wattle-work. When the earth has been brought together it is beaten and consolidated.

Crops principally cultivated on *báráni* lands.

There is little to say on the subject of the crops cultivated on *báráni* lands; they are almost identical all over the district; in the *rabí* principally wheat, with a little mustard, *tára míra* and gram;

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Crops principally cultivated on *báráni* lands.

in the *kharíf* principally *bájra*, with a little *moth*, *chari* and cotton. The figures are given at page 104. *Chari* is the term locally applied *joár* sown thickly. The effect of sowing it thickly is that it grows a finer and more tender stalk, and therefore better suited for cattle fodder, which is the sole purpose for which this crop is grown. In ordinary years a great deal of gram is grown on the sandy soils of tahsíl Talagang and in the south-west corner of tahsíl Chakwál; but, in a good year, the *zamíndárs* prefer to cultivate wheat, because gram is a delicate crop easily spoiled by plentiful rain in January and February. The year of the Settlement measurements in Talagang happened to be one in which less than the usual area had for, these reasons been sown with gram.

Mixed crops.

Before leaving this part of the subject one other feature in the agriculture of the district deserves notice, *viz.*, the custom of sowing mixed crops generally called *berará*. All over the district it is a very general practice to sow a little mustard mixed up with the wheat. The mustard thus sown is cut green and given to the cattle mixed up with *bhúsa*. The result is to supply the cattle with a limited amount of green food of good quality in the later winter months, at a time when there is hardly any grass or other green food of any sort (the young wheat excepted). The presence of the mustard plant among the wheat does not interfere in any degree with the growth of the wheat crop. In the same way mixed crops of *bájra* and *moth* are very common. *Moth* is sown later than *bájra*, and if the cultivator thinks he will not get a good *bájra* crop he adds *moth* to fill up the field. As the season advances he commonly allows the crop which promises best to come to maturity and feeds his cattle with the other. In the same way *tára míra* and mustard are not unfrequently sown into a poor *bájra* crop when the young plants are ploughed over (*seel*) in August. *Moth* is added to a poor cotton field for a like reason. An equally thrifty practice is the sowing of *tára míra* and mustard on the field banks, which prevails all over the district, especially in the Chakwál tahsíl, thereby securing a crop return even from the land occupied by these banks.

Principal staples.

Table No. XX shows the areas under the principal agricultural staples. The remaining acres under crop in 1880-81 and 1881-82 were distributed in the manner shown in the margin.

Crop.	1880-81.	1881-82.
Kangni	25	7
China	389	309
Mattar	378	237
Másh (Urd)	551	1,412
Múng	10,618	7,295
Masur	2,102	1 600
Coriander	9	15
Chillies	267	263
Other drugs and spices	1,562	283
Linseed	264	180
Mustard	11,880	8,453
Til	502	656
Tára Míra	47,570	52,922
Hemp	590	778
Kasumbha	144	75

Detailed figures for the crop areas existing at the recent Settlement Survey (1875-76) are given at page 98. The principal staples of the district are wheat and *bájra*, which are noticed on the next pages. Cotton cultivation has already been described at page 103. The two crops most largely grown are wheat for the spring harvest and *bájra* (spiked millet) for the autumn. These in fact are the only crops grown over a large area. The other grains are barley and gram in the spring, and *jowár* (great millet), *moth* (*Phaseolus*

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Principal staples.

aconitifolius) and *mung* (*Phaseolus mungo*) in the autumn. Besides these, oil seeds are largely grown for the spring harvest, principally *sarson* (mustard) and *tára míra* (*Sinapis eruca*). Cotton too is grown for the autumn harvest, but now not in great quantities. The American war gave a great impetus to this industry, which has lately again fallen off in amount. The cotton of Talagang and the higher uplands is the best.

Tára míra is largely cultivated on the high earthen banks between the fields—a situation which enables it to spread and become bushy, so that the yield of seed is very large, and much excellent oil is obtained from what would otherwise be useless and barren spaces. Some very good *kasumbha* (saffron) dye is also grown in the same way. Sugarcane is little grown except near Pind Dádan Khán along the river. In addition to these the common vegetables are largely grown, such as onions, radishes, carrots and turnips in the cold season; and melons, cucumbers, and pumpkins in the summer. Potatoes and other garden vegetables, peas, cauliflower, cabbage, &c., though introduced since our rule, are not generally grown. Mangoes, oranges, sweet and sour limes, as well as grapes and pomegranates, are to be had, but gardens are few and far between, and the fruit of no particular excellence. The gardens of Sanghoi and Pind Dádan Khán are the most famous—Sanghoi for its oranges and Pind Dádan Khán for mangoes.

Seedtime and harvest.

The subjoined table gives the seasons of sowing and reaping the principal crops:—

Names in English.	Names in Vernacular.	Time for sowing	Time for reaping.
Wheat	Kanak	Octr. & Nov.	March & April.
Peas	Mattar	Do.	March.
Barley	Jau	Do.	Do.
Sinapis eruca	Tára Míra	Sept., Oct., and Novr.	Do.
Tobacco	Tambáku	March and April	June & July.
Saffron	Kassumba	Octr and Nov.	March.
Gram	Chola	October	Do.
Lentil	Massúr	Octr. and Nov.	Do.
Poppy	Post	November	April.
Mustard	Sarson	Sept. and Octr.	March.
Millet	Bájra	July and August.	Oct. & Nov.
	Jowár	August and Sept.	Do.
Pulses	Moth, Mung, Mash	Do.	Do.
Cotton	Kapas	March	December.
Sugarcane	Kamad	March and April	January.
Sesame	Til	July and Augt.	November.
Maize	Makkai	July & Augt.	October
Rice	Chahwal	Novr. & May	September.
Hemp	San	June & July	November.

The wheat sown is always the red-bearded variety, and is known as *surkh* or *lál kanak*. It is said to be harder and easier to thrash out than white or beardless kinds. Wheat is the only crop sown with the drill. All others are sown broadcast. The straw of wheat is of course the *chita bhusá*, while the straw of *moth*, and other autumn pulses, is *missa bhusá*.

Wheat should be sown if possible within the two *dhayas* or fixed periods, which are generally reckoned from 15th Assu to 5th Kátak. But the dates vary slightly in different parts of the district. In reality, however, the wheat sowing, like all other agricultural operations in this district, depends almost entirely on the rainfall. If the

wattar is insufficient the sowing is frequently delayed to the month of Maghar. Wheat is very little weeded. In industrious villages the ground is ploughed and cross-ploughed twelve or fourteen times, but Saiads and such like are content with once or twice. The harrow is also used. Wheat is reaped in Baisákh.

Seedtime and harvest.

Bájra is sown broadcast as soon as the rainfall permits of it. Hár is the best month in which to sow; but, if there is heavy rain at the end of the *rabí* season, *bájra* is often sown in Jeth, and is then called *jetha*. It is said to come up fast and strong. The native proverb on the subject is *Jetha Paletha* after an analogy taken from marriage. If *bájra* ripens early it is customary in some villages to cut off only the head or *sitta*, leaving the stalks standing. Very commonly several additional heads of good quality but small size are formed anew. These are called *panján* or *kachha*. The *bájra* stalks or *tanda* are of little use. *Bájra* is usually reaped in Kátak. It is often weeded.

Average yield. Production and consumption of food grains.

Table No. XXI shows the estimated average yield in lbs. per acre of each of the principal staples as shown in the Administration Report of 1881-82. The average consumption of food per head has already been noticed at pages 55, 56. The total consumption of food grains, by the population of the district as estimated in 1878 for the purposes of the Famine Report, is shown in maunds in the margin. The figures are based upon an estimated population of 500,988 souls. On the other hand, the average consumption per head is believed to have been over-estimated. A rough estimate of the total production, exports, and imports of food grains, was also framed at the same time; and it was stated (page 152, Famine Report) that the average annual export amounted to four and a half lakhs of maunds, chiefly wheat, which was sent for the most part to Multán and Sindh, but also in some quantity to Ráwalpindi.

Grain.	Agriculturists.	Non-agriculturists.	Total.
Wheat	905,513	770,761	1,676 274
Inferior Grains...	428,927	177,067	605,994
Pulses	254,179	93,741	347,920
Total ...	1,588,619	1,041,569	2,630,188

Arboriculture and forests.

Table No. XVIII shows the area of the several forests of the district which have been declared under the Forest Act, together with the degree of protection extended to each; while Table No. XVII shows the whole area of waste land which is under the management of the Forest Department. The following note on the forests of the district has been kindly furnished by Mr. Reuther of the Forest Department.

"The *rakhs* under the control of the Forest Department in the Salt Range are situated partly in the Jhelam and partly in the Sháhpur district (Khusháb tahsíl), comprising 309 square miles in the former and 211 square miles in the latter district. As they are entirely similar in physical and accidental characteristics, one general description will apply to the *rakhs* in both districts.

The Salt Range.

"The general character of the Salt Range is that of an elevated tract, rising abruptly to an average height of 2,200 feet above the alluvial flats of the Jhelam river on the south, but descending more gradually to the undulating plateaux on the north, above which its mean elevation is not more than a thousand feet. Its general course is east-by-north to west-by-south, extending over a distance of about 150 miles, by an average width of about ten miles. But to the east of Jalálpur the range is deflected sharply to the north for a distance of about eight

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Agriculture and Arboriculture.

The Salt Range.

miles, after which, assuming a north-easterly course, it reaches a height of 3,200 feet at Tilla, from which point it rapidly loses in height until it merges, and is finally lost, in the plain country north-east of Jhelam. The average width of the section east of Jalálpur is about three miles. At a distance of 36 miles from its western extremity, the course of the Range meets with another abrupt turn to the north-west by north; descending sharply from the culminating point of the range at Sakesar (5,010 feet) to the Indus. With the section from Sakesar to the Indus, which lies in the Bannu district, the Forest Department is not concerned.

"North-east of Jalálpur, and detached from the Salt Range proper by the bed of the intervening Bunhá torrent, is an outlying tract formed almost entirely by the Tilla mountain and its eastern extension of undulating, barren country, intersected by numerous ravines. The Salt Range proper commences at Jalálpur, and from there extends westwards without a break, rising gradually but steadily from 1,800 to 3,000 feet near its centre, and finally culminating in the peak of Sakesar at an elevation of 5,010 feet. The width of the western part of the range also increases gradually from 2½ miles at Jalálpur (Jhelam district) to 20 miles at Jabbi (about 18 miles east of Sakesar in the Sháhpur district) from which latter point it again contracts until the width at Sakesar is reduced to ten miles.

Salt Range *rakhs*.

"In the tract between Jalálpur and Sakesar lie the *rakhs* Ara Makhiála, Kussuk, Dandot, Dalwal, Malot, Simli, and Núrpur, all in the Jhelam district and Mangwál, Katha Masrol, Dilmini, Kund, Dhokri, Choha, Warehá, &c., in Sháhpur, in all of which *rakhs* the soil contains more or less abundant deposits of salt which frequently crop out on the surface.

"The whole of the southern portion of the range from Sakesar westwards forms one continuous chain, steeply scarped on its southern face, and bounded to the north by elevated plateaux of irregular surface configuration, here and there surmounted by minor escarpments facing southwards. But north-east of Khewra, where the Mayo Salt Mines are situated, a spur springs from the northern side of the Range, separated from it by a broad expanse of rugged country, and stretches to the north-east for a distance upwards of 30 miles. At its western extremity where it leaves the main mass of the Range, this spur is formed by the Diljabbá mountain, the summit of which has an altitude upwards of 3,000 feet and a width of three miles; but further to the east the ridge declines to a mean height of 2,300 feet, and finally disappears in the broken ground near the right bank of the Jhelam river. This spur is covered by the rakhs Diljabbá, Baroli, Nili, Jindi, Lehri, Ban, Samail, and Sagar, and contains no known deposits of salt.

"South-west of Diljabbá is the Drengan *rakh*, situated on a broad slope facing northwards, crowned by the ridge containing the Chel summit, the highest in the Jhelam district (3,701 feet). Its western extension dips down into a depression separating the Chel ridge from that of Karangal (3,526 feet) which latter on the western side terminates abruptly in a precipitous escarpment, but on the north descends gradually into the broken ground which extends for many miles beyond the northern boundary of the Salt Range. West of Karangal is the Choya Saidan Sháh valley, with the Surla rakh on the north, the Ramhalawan, Dharm-tirath, and Gandhala ridges on the east, and the Dalwal, Malot, and Simli rakhs on the south.

"The Simli ridge throws out a spur to the north; which is separated by a narrow gap of more or less level country from the ridge comprising the Bagga, Samarkand, and Chinji rakhs. This ridge extending into the Sháhpur district, pursues an easterly course, separated from the southern range of Salt *rakhs* by a broad plateau varying in width from four to 12 miles, but re-uniting with the main mass of the range at Sakesar. This northern ridge comprises the *rakhs* Jabba, Khabakki, Dhadhar, Makrumi, Mardwal, Angu, Kotli, Ugali, and Chitta, none of which contain deposits of salt.

Distribution and nature of trees.

"One of the most characteristic of the physical features of the Salt Range is the steep precipitous escarpment on its southern face. This is most marked in the central portion from Jalálpur to Sakesar, where the range rises almost perpendicularly above the alluvial tract lying at its foot, and forms a fine façade of lofty cliffs, penetrated by numerous ravines and gorges.

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Distribution and nature of trees.

From this feature it might be inferred that the southern portion of the Range is but scantily clothed with vegetation, and this is indeed the case The whole of the southern escarpment, as well as the heights immediately above the precipitous cliffs, are almost devoid of vegetation, and the surface is composed of rugged, bare rock-masses, incapable of affording nourishment even to such hardy trees and shrubs as are indigenous in the Salt Range. The northern slopes, and the upper plateaux at some distance from the southern escarpment are frequently covered with a more or less dense growth of shrubs, but as a general rule trees, excepting stunted specimens of *Acacia modesa, Olea cuspidata*, &c., are entirely absent.

"The predominating species of shrubs and trees met with in the Salt Range *rakhs* are *Dodonœa viscosa (Sanatha)*, *Adhadota nasica (Bahikar)*. *Celastrus spinosus (Phataki)*. *Acacia modesta (Phulai)* and *Olea cuspidata* (Olive), but here and there occur specimens of *Dalbergia sissu (shisham)*. *Acacia Arabica (kikar)*, and *Butea frondosa (Dhak)*. In favourable localities, such as the summit of Tilla, Chel, and Sakesar, many other species are found, such as *Pistacia integerrima (khangar)*, *Bauhinia variegata (kolar)*, *Odina wodier (kamlai)*, *Grewia oppositifolia (dhamman)*, *Punica granatum* (Pomegranate), *Tecoma undulata (Lahura)*, *Buxus sempervirens* (Box). *chœnix sylvestris* (Palm) *chamœlrops Ritchieana (Kilium)*, *Dendrocalamus strictus* (Bamboo), &c., In the numerous ravines and torrent beds, clumps of *Nerium odorum* (Oleander) are common, and here and there the steep escarpments are covered with hanging masses of *Hedera helix* (Ivy). But on the whole the Salt Range is poorly wooded, and the existing trees are so stunted and starved as scarcely to deserve the name of trees"

The following is a list of the trees, specimens of the wood of which were contributed to the Lahore Museum of 1864, from the Jhelam district and the Salt Range generally.

Sissu (Dalbergia sissu).	*Dhaman (Grewia elastica).*
Siris (Acacia sirissa).	*Kikar walayati (Parkinsonia).*
Bukain (Melia azadirachta),	Mulberry, *tut (Morus Indica).*
Banian (Ficus Indica).	*Kachnar (Bauhmi variegata).*
Kamlai (Odina wodier).	*Lasura (Cordia muxa).*
Kikar (Acacia Arabica).	*Dhak (Butea frondosa).*
Kakkar (Rhuss acuminata).	*Lakura (Tecoma undulata).*
Wild olive, *kau (Olea Europœa).*—	*Falidhar (Symosporia spinosa).*
Ber (Zizyphus jujuba).	*Larga (Rhus Continus).*
Phulahi (Acacia modesta),	*Sagghar (Ehretia elastica).*
Sohagna (Hyporanthera pterygosperma).	

Forest Management.

"The Forest Department has been in charge of the Salt Range *rakhs* since 1870, but hitherto the system of treatment has been purely protective, and no marked improvement can be said to have taken place. But this is due to the incessant damage done by cattle, particularly camels, goats and sheep, which allow no seedlings to spring up, and commit great injury on existing trees by browsing off the shoots and extremities of branches to some extent; also injury is traceable to the action of the inhabitants of the Salt Range, who not only commit frequent wood-thefts, but constantly persist in lopping trees to provide food for their cattle. But exclusion of cattle once effected, the *rakhs* will undoubtedly improve rapidly. A few of the *rakhs*, such as Drengon and Parera, which in the days of the Sikh rulers were carefully preserved for the sake of the game they sheltered, prove by the favourable condition of the existing vegetation that the Salt Range is not incapable of producing a tolerably abundant growth of valuable fuel and grass, if not of timber.

"The present condition, however, of the *rakhs* being such as to preclude the possibility of exploitation, and to necessitate careful preservation of the existing vegetation, the policy hitherto pursued has been to maintain as strict a system of protection as circumstances permitted, and to avoid drawing upon the *rakhs* for supplies of fuel. In one instance, however, under the pressure of urgent necessity during the Afghan war, several extensive tracts in *rakhs* Nili, Jindi, Paniala, and Gorat were cleared of trees for the supply of fuel to the Panjáb Northern State Railway. This is, however, the only occasion in which extensive

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Mineral products.

fellings have taken place, and the tracts denuded of trees have been closed against cattle.

"In addition to the pasture afforded by the Salt Range *rakhs* to the cattle of the villages in and near the Salt Range, some use is made of the mineral products, such as coal and building stone. Of the former many beds are known, some of which are worked; and during the first nine months of working 4,292 tons of coal were raised, from which Government realized Rs. 8,586 as royalty. The working of the coal is now under the control of the N. I. Salt Revenue Department, and the royalty has been reduced from two rupees to four annas per ton.

"Building stone of superior quality is quarried in large quantities at Taraki (in *rakh* Nili) by the Engineers of the P. N. S. Railway, and occasionally contractors and others purchase stone in various localities of the Salt Range, paying to Government a royalty of four annas per 100 cubic feet. But the income from this source is insignificant, for although superior building stone is abundant in all parts of the Range, the demand for it is small.

List of *rakhs* and village rights.

"The following table shows the area of each *rakh*, and the nature and the extent of Government and village rights respectively. All these have been created reserved Forests under the Act.

Forests under control of the Forest Department in the Jhelam District.

Tahsil.	Name of Rakh.	Area in acres.	Nature and extent of Government and village rights.
		Acres.	
Jhelam ...	*Sagar* ...	906	Certain village communities possess the right to pasture cattle and collect dry wood in certain defined areas, and to exercise a right of way through part of the *rakh*. In all other respects, the proprietary and other rights vest exclusively in Government.
Ditto ...	*Paniala* ...	1,376	Certain villages entitled to pasture cattle and collect dry wood in certain defined areas; otherwise all proprietary and other rights vest exclusively in Government.
Ditto ...	*Ban Samail*	1,350	All proprietary and other rights vest exclusively in Government.
Ditto ...	*Jindi* ...	5,500	A number of village communities possess the right to pasture cattle and collect dry wood in certain defined areas. In all other respects the proprietary and other rights vest exclusively in Government.
Ditto ...	*Garat* ...	2,150	Certain villages entitled to graze cattle and collect dry wood in defined localities, and to exercise a right of way through a part of the *rakh*. In all other respects the proprietary and other rights vest exclusively in Government.
Ditto ...	*Lehri* ...	11,000	A number of villages possess the right to pasture cattle and collect dry wood in defined areas. In all other respects the proprietary and other rights vest exclusively in Government.
Ditto ...	*Nili* ...	18,400	Ditto ditto ditto.
Ditto ...	*Barali* ...	8,000	Certain village communities are entitled to pasture cattle in the *rakh*, so long as it remains open. In all other respects the proprietary and other rights vest exclusively in Government.
Ditto ...	*Phadial* ...	11,603	All proprietary and other rights vest exclusively in Government.
Ditto ...	*Tilla* ...	26,000	The Tilla Jogis and a number of village communities are entitled to pasture cattle and collect dry wood in certain defined areas. In all other respects the proprietary and other rights vest exclusively in Government.
Ditto ...	*Pind Ratwal*	7	All proprietary and other rights vest exclusively in Government.

Forests under control of the Forest Department in the Jhelam District.—(Continued.)

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List of *rakhs*, and village rights.

Tahsíl.	Name of Rakh.	Area in acres.	Nature and extent of Government and village rights.
Jhelam ...	*Pira Ghaib* ...	914	All proprietary and other rights vest exclusively in Government.
Ditto ...	*Saila* ...	192	Ditto ditto ditto.
Pind Dádan Khán ...	*Ará* ...	11,718	Ditto ditto ditto.
Ditto ...	*Parera* ...	3,233	Ditto ditto ditto.
Ditto ...	*Dewán* ...	702	Ditto ditto ditto.
Ditto ...	*Diarmtirath*	623	Ditto ditto ditto.
Ditto ...	*Kirángal* ...	1,370	Ditto ditto ditto.
Ditto ...	*Rámhálúwán*	500	Ditto ditto ditto.
Ditto ...	*Bakhshiwálá*	2,207	Ditto ditto ditto.
Ditto ...	*Samarkand* ...	9,048	Ditto ditto ditto.
Ditto ...	*Thaláíla* ...	1,631	Ditto ditto ditto.
Ditto ...	*Malot* ...	4,004	Ditto ditto ditto.
Ditto ...	*Simli* ...	14,315	The Pirs of Pir Khárá are entitled to graze cattle within such area as may, from time to time, be set apart for such purpose. In all other respects the proprietary and other rights vest solely in Government.
Ditto ...	*Núrpúr* ...	15,283	All proprietary and other rights vest exclusively in Government.
Ditto ...	*Ghandala* ...	3,933	Ditto ditto ditto.
Ditto ...	*Sagarpur* ...	11	Ditto ditto ditto.
Chakwál ...	*Diljabbá* ...	5,097	Ditto ditto ditto.
Ditto ...	*Drengang* ...	5,716	Ditto ditto ditto.
Ditto ...	*Bagga* ...	3,781	Ditto ditto ditto.
Talagang ...	*Kot Kalán* ...	2,089	Ditto ditto ditto.
Ditto ...	*Mári* ...	7,500	Ditto ditto ditto.
Ditto ...	*Chinji* ...	17,312	Ditto ditto ditto.
Total area in acres ...		1,97,471	

Live stock.

Table No. XXII shows the number of live stock as stated in the Administration Report at different periods. The figures given below are those of the Settlement enumeration of 1875-76.

Horses.

The horses of this district—especially those of the Dhan—have long been held in good estimation. Abul Fazl remarks in the *Aín Akbari* that these "horses resemble Irákís and are very fine" (Gladwin's Translation, II, 109). In former days the greater part of the Sikh cavalry was horsed from the Dhanni plains north of the Salt Range, and even now large numbers of remounts are drawn thence by the British Army; but the fall of the rich Sikh Chiefs has removed the incentive for breeding large and powerful horses, such as the native gentleman delights in. Although the Dhan is best known for its horse-breeding, yet very good animals are to be found all over the district. Some of them are fast, and nearly all are remarkably enduring, and able to go over the stoniest ground without shoes. It may be doubted whether the Dhanni and Talagang breeds are not deteriorating. Owing to the spread of cultivation and other causes the animals are allowed much less liberty than formerly; and the method of tethering them up is often very bad. But the main reason of any decay in quality is no doubt that many of the best brood mares are annually sold out of the district at the Rawalpindi Fair. The natives know very well what the inevitable effect of these sales must

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Agriculture and Arboriculture.

Horses.

be; but they seem quite unable to resist the high prices offered. Horses are generally fed on gram or barley; but *moth*, *bájra* and *tára míra* are also in use. In the spring they are often stuffed with green wheat and *gur* till they become loaded and unwieldy with fat. The usual feed for a brood mare is four seers of grain a day besides grass; but the quantity depends a good deal on the means of the owner. The number of horses recorded in the recent Settlement Returns is 5,763, ponies 711, mules 2,245, donkeys 22,815.

Only four horse fairs have been held in the district, *viz.*, two in 1879, one in 1880, and the fourth in 1881, the fairs having subsequently been transferred to the Gujrát district. The following are the details of the shows held. In March 1879, 149 animals were exhibited; 77 competed for prizes, of which number 32 received prizes; 4 sales to Cavalry Remount Officers were registered, average value of purchases was Rs. 245 per animal. In October 1879, 126 animals were exhibited; 81 competed and 40 received prizes; 79 animals were brought for sale, of which number 16 horses were sold for an aggregate of Rs. 3,002. In October 1880, 135 animals were brought to show; 76 competed, of which some received prizes. Four animals were purchased for the 5th Bengal Cavalry and 3rd Panjáb Cavalry for Rs. 822. In October 1881, 183 animals were brought to the fair; 117 competed, of which 41 received prizes and a few honorary certificates. Five animals were sold for Rs. 869. Colts receive a fair amount of care from the district dealers, but they are too often tethered instead of being allowed to exercise freely, and they are frequently ridden too young, causing blemishes while their sinews and bones are tender.

The following is a memo. of horse-breeding statistics, &c., in the Jhelam district:—

Name of Tahsíl.	Year in which Govt. Stallions were first introduced.	No. and breed of Govt. Stallions now in district.		No. of branded Mares for Horse-breeding now in the district.	No. of branded Mares for Mule-breeding now in the district.	Approximate No. of Colts castrated in district to date.	Estimated No. of remounts obtained from the district for the army since Govt. Stallions were introduced to date.	Estimated No. of Colts taken by dealers since Govt. Stallions were introduced to date.
		Horses.	Donkeys.					
Jhelam ...	1855.	N.T.&T.B. 2	Arab 3	82	6	62	25	33
Chakwál ...	do.	N. T. 3	do. 2	131	68	93	36	26
Pind D. Khán	do.	Arab 1	do. 1	67	6	31	12	19
Talagang ...	do.	N. T. 2	do. 1	83	29	31	12	20
	Total...	8	7	263	109	217	85	98

Camels.

Camels for riding are hardly known in the district. Pack-camels are in pretty extensive use, especially for carrying salt. The breed is not particularly good. It goes through too much work. During the late Afghán war many camels left the district and never returned. Many others died at home from exhaustion. The Settlement figures therefore probably overstate the number now existing. The return shows 11,139 head. Camels are shorn once a year in Chait. The hair is made into ropes and sometimes into *borás*. Camel-milk is

drunk but not very generally. In three tahsíls camels pay a special *tirni*, which it is now proposed to abolish.

Kine.

Kine are of average quality, although very good plough-bullocks are often met with, and realize large prices. The grazing of the country is poor, which is quite sufficient to explain the inferiority of the cattle. Large herds are often driven down to Amritsar for sale at the Diwáli and Baisákhi fairs. There is also a considerable trade in hides; and, of course, milk is an important article of food. The number of horned cattle shown in the recent Settlement Return is 339,816, of which 152,934 are shown as used for the plough. There are nine Hissár bulls now in the district, and they have somewhat improved the breed.

Sheep.

Sheep are of two breeds—the ordinary, and the *dúmba* or fat-tailed species. The latter is reckoned the best; but neither is of very good quality. Sheep are shorn twice in the year, in or about October and March. The yield of wool on the average is probably not much more than one *sér* per sheep per annum. The milk of the ewes is drunk, and mutton is sometimes eaten. Rams have twice been obtained from Hissár; but the climate and the dryness of the pasture seem to be unsuited to them and they have all died.

Goats.

Goats are of fairly good quality. Their hair is cut only once a year in Baisákh. The yield is about one *sér*, and is used for ropes and sacks. The milk is good and is largely consumed. The number of goats and sheep returned is—Sheep 134,809, goats 110,036. She-goats and ewes give on an average one kid or lamb in the year and continue producing for five or six years.

SECTION B.—OCCUPATIONS, INDUSTRIES AND COMMERCE.

Occupations of the people.

Table No. XXIII shows the principal occupations followed by males of over 15 years of age as returned at the Census of 1881; but the figures are, perhaps, the least satisfactory, of all the Census statistics, for reasons explained fully in the Census Report; and they must be taken subject to limitations, which are given in some detail in Part II, Chapter VIII of the same Report. The figures in Table No. XXIII refer only to the population of 15 years of age and over. The figures in the margin show the distribution of the whole population into agricultural and non-agricultural, calculated on the assumption that the number of women and children dependent upon each male of over 15 years of age is the same, whatever his occupation. These figures, however, include as agricultural only such part of the population as are agriculturists pure and simple; and exclude not only the considerable number who combine agriculture with other occupations, but also the much larger number who depend in great measure for their livelihood upon the yield of agricultural operations. More detailed figures for the occupations of both males and females will be found at pages 124 to 132 of Table

Population	Towns.	Villages.
Agricultural ...	10,987	318,019
Non-agricultural ...	50,122	210,245
Total ...	61,109	528,264

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Occupations, Industries and Commerce.

Occupations of the people.

XIIA, and in Table XIIB of the Census Report of 1881. The figures for female occupations, however, are exceedingly incomplete.

The Deputy Commissioner noted that at the time of the Census of 1881, the high rates of wages to be obtained on the Railway and other works, and in connection with transport operations within an easy distance of their homes, had temporarily attracted from their ordinary avocations many weavers and other artisans.

The following figures show the occupations, or rather the means of support (for women and children are included in the figures), of the *resident* population, as ascertained at the Settlement Census of 1875-76:—

Detail of the population with regard to means of support.

Tahsils.	Detail of Religion.	Cultivators.	Shop-keepers.	Artizans.	Coolies.	Carriers.	Government servants.	Kamins.	Others.
Jhelam.	Hindu and Sikhs ...	1 867	6,402	926	720	991	1,021	699	...
	Musalmáns ..	102,318	1,598	22,620	5,487	570	1,346	3,907	...
	Total ...	104,185	8,000	23,546	6,207	1,561	2,367	4,606	...
Pind Dadan Khan.	Hindu and Sikhs ..	2,363	11 016	1,187	1,991	2,373	1,563	1,310	191
	Musalmáns ...	79,208	1.840	29 768	10,676	1.874	1.602	2,972	1,162
	Total ...	81,571	12,856	30,955	12,667	4,247	3.165	4,282	1,353
Chakwal.	Hindu and Sikhs ...	4.772	6.323	1,742	540	3,479	1,334	852	122
	Musalmáns ...	92,936	1,094	25,625	2,302	159	194	555	1,130
	Total ...	97,708	7,414	27,367	2,842	3,638	1,528	1,407	1,252
Talagang.	Hindu and Sikhs ...	905	4,526	473	460	792	383	335	...
	Musalmàns ...	54,317	62	12,385	2,177	289	143	856	...
	Total ...	55,222	4,588	12,858	2,637	1,081	526	1,191	...
Total District.	Hindu and Sikhs ...	9.907	28,267	4.328	3,711	7,635	4.301	3,196	313
	Musalmàns ...	328,779	4,594	90,398	20,642	2,892	3,285	8,330	2.292
	Total ...	338,686	32,861	94,726	24,353	10,527	7,586	11,496	2,605

Principal industries and manufactures.

Table No. XXIV gives statistics of the manufactures of the district as they stood in 1881-82. The principal non-agricultural industry of the district is the production, or rather the excavation of salt, which has already been fully described in Chapter I (pages 16, 25). Some minor industries are noticed below.

Gold-washing.

The process of gold-washing has already been described in Chapter I (pages 25, 26). It is carried on in a very small way in several of the torrent beds or *kasis*. The *kárdár* of Mokhund told Dr. Fleming in 1848 that the production of gold was as follows: 1844—409 tolahs (tolah = 165 grains); 1845—272 ditto; 1846—332 ditto. The gold-washers conceal the amount as much as possible to reduce the tax. The gold-washings of the Salt Range are nearly all in the Jhelam district. In the year 1858, 158 cradles were at work, and they were taxed from Rs. 2 to 5 per

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drún ; the total tax amounted to Rs. 525. In 1870-71 and 1871-72, the revenue derived from the Jhelam gold washings amounted to Rs. 365 and Rs. 312 respectively. The fee levied is still Rs. 2 to Rs. 5 per cradle, according to locality; but, in 1880-81, the income realised was only Rs. 279. There is nothing received under this head from the Pind Dádan Khán tahsíl. Off and on, a gold-seeker is said to make about six annas a day. Eight of them generally make up one party. They are called *kiré log* by the villagers.

Boat-building.

A good deal of boat-building goes on at Jhelam and at Pind Dádan Khán. A large native boat is called *béri*. Those who choose may believe that the model was supplied by Alexander the Great. There is still a good deal of river-borne traffic, and some of the *béris* can carry as much as 1,000 maunds. A small boat on a European pattern is called a *machhuá ;* and if of a native pattern, a *dúngí*. The number of boats in the district is 160.

Glass-working.

At or near Sultánpur of the Ghakars there are about fifty families who work in glass, but live chiefly by agriculture. They pick out flint stones by actual search, pound them up with a hammer and in a hand-mill, mix them with *sajji*, and then burn them in a furnace for 24 hours. The result is a coarse glass, which is made into beads and bracelets. These are sold chiefly in the west of the district or to traders from Kábul. The whole industry is in decay. The cheap glass ornaments from England beat the native manufacture out of the market. Fashion now generally seeks for the more sumptuous ornaments of silver; and the Forest Department and the spread of cultivation have combined to make fuel dearer than it once was.

Weaving.

The other industries of the district are mostly commonplace in character and petty in extent. Silk *lungís* are made at Pind Dádan Khán, but the demand for them is slack and prices have fallen.

Brass-work.

The braziers (*thatiár*) of the same town have been already mentioned. They are too much given to drink, and are often mere labourers under the money-lenders who advance funds to them.

Fisheries.

The right to fish with nets in the Jhelam is sold by annual license at Rs. 10 per license. In 1880-81 the income from this source was Rs. 60, and in 1881-82, Rs. 110.

Water-mills.

There are 195 water-mills in the district which pay an annual income to Government of Rs. 762, which is divided between the Forest Department and the ordinary Land Revenue. The mills are called *jandar* or *gharát*. They are merely the ordinary *chakkís* worked from below by a small stream which gives rotation to a paddle.

Mr. Lockwood Kipling, Principal of the Lahore School of Art, has kindly furnished the following note on some of the special industrial products of the district:—

Manufactures.

At the town of Jhelam the visitor sees but few signs of trade, but in grain or timber. At Pind Dádan Khán excellent brass ware is wrought. Large water vessels (*Ganga ságar*) of Hindu design, and *gagars* with *thális* or dishes deeply chased with very good ornament were sent to the Panjáb Exhibition, 1881, and purchased for the South Kensington Museum.

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Manufactures.

Copper utensils are also spoken of in the report on internal trade and manufactures for 1882-83 as being made of good quality here. There is a small production of silk *lúngís* and the usual amount of cotton weaving. From the same place stout cutting whips of English pattern made in leather were sent to both the Panjáb and Calcutta Exhibitions, from which it would seem they are regularly made. The whips are somewhat large, and more pliable than is a new English whip, but the silver mounts had not the perfect finish of English work. The unglazed pottery of Chakwál and Pind Dádan Khán is remarkably strong and good, that from the latter place being a deep red in large and bold forms ornamented with black patterns.

Government service.

Service under Government can hardly be classed as a trade or as an industry; but it is an employment of a special character, and those employed are in this district a very important class, which numbers among its members many who belong to the most considerable families of the most considerable tribes. The Settlement Officer thus discusses a table given in his report which is not printed here:—

"The table annexed will perhaps be found interesting. It gives details as to the distribution and pay of those natives of the district who are in Government service. *Lambardárs*, *chaukidárs*, *patwaris*, and political pensioners are all excluded. Yet it will be seen that there are 1,412 soldiers actually present with the colours, 791 men in the police force, and 1,671 men in other Government Departments. The total number of employés and pensioners is 4,193, or almost exactly eight per thousand of the gross population. This is probably five per cent of the men between 20 and 50 years of age. The annual stipends paid, including pensions, amount to Rs. 6,68,933, which is only Rs. 59,837 less than the new enhanced assessment of the whole district. It will be observed that Chakwál and Talagang furnish fewer Government servants than the other two tahsíls. It has been already remarked that Mairs, Kasars, Kahúts, and Awáns rarely take service. The large number of Hindus from the same two tahsíls is due to the existence in several villages—especially Bhon and Kariála—of many old *naukari-pesha* families whose members have an hereditary instinct for service. The fact that there are 1,782 Hindús of the district who are either servants or pensioners of Government is well worthy of notice. It must be remembered that the whole Hindu population is only 48,307, and this includes almost the entire trading class. Nothing could show more forcibly how entirely apart the Hindus are from any considerable proprietary share in the village life. Among the Muhammadans the Ghakars are the chief service tribe of tahsíl Jhelam, and the Janjúas of tahsíl Pind Dádan Khán. In Chakwál and Talagang there are no tribes especially addicted to service. The Hindus of tahsíl Jhelam come from a good many different villages. In Pind Dádan Khán, that city itself and Dilwál and Katás in the Kahún valley are their principal habitations.

Course and nature of trade.

There are no statistics available for the general trade of the district, though Table No. XXV gives particulars of the river traffic that passes through the district. The trade is very petty except in the two items of salt and timber. The exports and imports of food-grains have already been noticed at page 109. The export is partly from Jhelam, but still more from Pind Dádan Khán, from which place a considerable boat trade starts down river, going as far as Rohri. Grain export is the staple. Stone is sent by boat as far as Multán. The Tarrakawala stone quarry has been leased by the P. N. S. Railway and the stone from it is being used for Lahore Cathedral. Merchants travel about the district buying up hides, of which the best are sent to Calcutta for export to England, and the inferior ones to Amritsar, where they are dyed. Herds of cattle are driven to the

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Course and nature of trade.

Diwáli fair at Amritsar, and horses are regularly sold both there and at Ráwalpindi.

Salt is exported from Khewra by railway to all parts of the province and in boats to Karachi and the intermediate districts. Brass and copper wares are largely exported by railway from Pind Dádan Khán to other districts in the province. Silk *lúngis*, &c., manufactured at Pind Dádan Khán are exported to the adjoining districts by Railway. Cotton goods, blankets and shoes manufactured at Chakwál and Pind Dádan Khán tahsíls are exported to districts in the Panjáb in large quantities by railway, by boats and on ponies. Timber floated down the Jhelam from the mountains is largely exported from this district in country carts, by railway, and by water, for railway and other purposes.

Butchers buy sheep in large numbers in the district for Commissariat contractors. During the late American war there was a very large trade in cotton exported from the district, but this has almost entirely ceased now.

Jhelam is one of the districts in which foreign trade is registered; and the following note on the subject has been compiled from recent reports:—

"Trade with Kashmír is registered at the three ferries—Dhangrot, Mangla, and Gattalian; but the roads from all three ferries unite and all the trade goes *viâ* Amirpur to Punch. The trade so registered is not really conducted with Kashmír people, but only with the country belonging to Kashmír outside the hills. The value of the trade registered in 1882-83 is given in the margin.

	Imports.	Exports.
	Rs.	Rs.
Via Gattalian ...	31,832	48,786
Via Mangla ..	3,997	2,046
Via Dhangrot ...	38,092	4,772

"It is believed that the trade is of a miscellaneous local character: a good deal of grain is brought into the Jhelam district from this part of Kashmír."

SECTION C.—PRICES, WEIGHTS AND MEASURES, AND COMMUNICATIONS.

Prices, wages, rent-rates, interest.

Table No. XXVI gives the retail *bázár* prices of commodities for the last twenty years. The wages of labour are shown in Table No. XXVII, and rent-rates in Table No. XXI; but both sets of figures are probably of doubtful value. In dealing with the question of assessment at the recent Settlement, Major Wace has the following very interesting discussion of the rise in prices since the first Summary Settlement. :—

History of agricultural prices.

"From a general point of view the district is favourably situated for disposing of its surplus produce. The river Jhelam flows along its whole southern length. At its east end is the Railway Station; parallel with its length runs the salt-branch from Lála Músá to Miáni, and 40 miles north lies the large cantonment of Ráwalpindi. It is consequently certain that it will always at once participate in any fluctuations in prices which occur in Sind or in the Central and South Punjáb, as indeed it has always hitherto done.

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History of agricultural prices.

"I proceed to state the history of prices in the district. * * * The prices of agricultural produce were obtained by examining the books of several leading traders in each tahsil; the other prices, partly in this way and partly by verbal enquiry. Every *zamíndár* who has an account with a village (*khatri*) shopkeeper—and almost every *zamíndár* has such an account—has a settlement of his account after each harvest. The dates of these settlements usually are, first, Hár or Dhamde for the *rabi* (1[illegible]th June), and 1st Magh or Loi (12th January) for the *kharif*. In Pind Dádan Khán and Talagang the *kharif* accounts are settled somewhat earlier. The accounts of the whole village are generally settled at the same rates. An examination of the account books consequently shows the prices at which the produce of each harvest was credited to the agriculturists. I do not think it necessary to remark on every item of these returns, but shall confine myself to the most important articles.

"The prices of kine, flocks, &c., have altered as shown on the opposite page. Speaking roughly, we may say that the price of cattle, sheep, goats and their products have doubled since annexation, as also agricultural wages. The figures above given, and the fact that the last Settlement was only made eight years after annexation, I think justify also the deduction that a moiety of this increase in value has established itself during the currency of the expired Settlement. These high prices, and the manner in which they have been sustained during the past 20 years, are a very strong indication of the steady prosperity of the agriculturists. As soon as trouble comes these prices fall heavily; the agriculturists hope to pull through trouble by reducing the number of their cattle; a large number of cattle are offered for sale, and no one will buy except very cheaply. Reversely, in days of prosperity, they keep all the cattle they can buy and feed; and vie (often recklessly) with each other in selecting fine animals. It does not follow that when grain is dear cattle will also rise in value. This will only occur if the rise in the value of grain is caused by exportation. But if it is caused by local failure of crops, the cattle at once fall in value in proportion to the extent to which the agriculturists are distressed.

Range of prices during 44 years past divided into six periods.

"In dealing with the values of the products of cultivation I have divided the 44 years of which prices are forthcoming into six periods, as shown in the statement on page 123. The statement gives in the first line the percentage of the cultivated area now occupied by each staple and then its average price during each period. The prices of 1876, when the country had been glutted with a series of good harvests, are added in the last line; but grain is now again as dear as the average prices of 1866-70."

Price of land.

The figures of Table No. XXXII give the average values of land in rupees per acre shown in the margin for sale and mortgage; but the quality of land varies so enormously, and the value returned is so often fictitious, that but little reliance can be placed upon the figures.

Period.	Sale.	Mortgage
1868-69 to 1873-74 ...	18-14	15-13
1874-75 to 1877-78 ...	22-7	13-11
1878-79 to 1881-82 ...	28-0	18-6

Major Wace made a complete collection of all transfers of land made during the currency of the first Regular Settlement and recorded either in the annual papers or in *dákhil khárij* proceedings, or in the papers of the new measurement. The outcome briefly stated is that in the six years, 1871—76, the transfers by sale in tahsíl Jhelam were about 0·7 per cent. of the present cultivated area. The average price per acre was Rs. 48, or 44 times the amount of the annual assessment. In the remaining three tahsíls the percentage of the present cultivated area sold during the same six years was one in Talagang, and 1·1 in the other two tahsíls. The prices realized were Rs. 12 per acre, or 23 times the annual assessment in Talagang; Rs. 30, or 37 times the assessment in Chakwál; and Rs. 36, or 24 times the assessment in Pind Dádan Khán. It will be

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Prices of live-stock, &c.

	Jhelam.			Pind Dadan Khan.			Chakwal.			Talagang.		
	At end of Sikh rule.	1858 A. D.	1877 A. D.	At end of Sikh rule.	1858 A. D.	1877 A. D.	At end of Sikh rule	1858 A. D.	1877 A. D.	At end of Sikh rule.	1858 A. D.	1877 A. D.
Cow ... Rs.	10 0 0	16 0 0	16 0 0	7 to 15	10 to 20	15 to 35	10 0 0	15 0 0	22 0 0	10 0 0	15 0 0	21 0 0
Female Buffalo ... "	30 0 0	50 0 0	50 0 0	15 to 40	15 to 50	30 to 80	20 0 0	30 0 0	46 0 0	16 0 0	25 0 0	40 0 0
Bullock ... "	25 0 0	40 0 0	55 0 0	15 to 30	30 to 40	20 to 90	11 0 0	16 0 0	45 0 0	15 0 0	22 0 0	26 0 0
Sheep ... "	0 12 0	1 0 0	1 0 0	0 8 0 to 0 12 0	1 0 0 to 1 8 0	1 0 0 to 2 0 0	0 12 0	1 0 0	2 0 0	1 0 0	1 8 0	2 0 0
Milch Goat ... "	0 12 0	1 0 0	1 0 0	0 8 0 to 0 12 0	0 8 0 to 1 0 0	1 0 0 to 2 10 0	0 12 0	1 0 0	2 0 0	0 8 0	0 10 0	0 14 0
Goat ... "	1 8 0	2 0 0	2 0 0	0 12 0 to 1 8 0	1 8 0 to 2 8 0	2 8 0 to 5 0 0	1 4 0	2 0 0	3 0 0	1 4 0	1 12 0	2 8 0
Ghi, sérs ... per rupee	4	$2\frac{7}{8}$	$1\frac{3}{4}$	$2\frac{1}{2}$	$3\frac{3}{8}$	$1\frac{5}{16}$	4	$2\frac{15}{16}$	$1\frac{3}{4}$ & 2	2	$2\frac{1}{2}$	2
Goats' hair, *sérs* ... "	20	12	7	9	$8\frac{1}{2}$	$6\frac{3}{4}$	20	10	6	8	6	5
Sheep's wool *sérs* ... "	8	6	4	7	3 to $4\frac{3}{4}$	$4\frac{1}{4}$	8	$4\frac{11}{16}$	4	7	4	$3\frac{1}{2}$
Country cloth, yd. "	20	18	16	16	$13\frac{3}{4}$	14	20	16	12 & 15	18	15	13
Coolies' wages per diem, Rs.	0 1 6	0 2 0	0 2 0	0 1 0 & 0 1 6	0 2 0	0 2 0	0 1 4	0 2 0	0 2 6	0 2 0	0 2 0	0 2 6
Farm servants, per half year, besides food and clothes, Rs. ...	3 0 0	6 0 0	6 0 0	3 0 6 & 4 0 0	6 0 0 & 9 0 0	12 0 0	3 0 0	9 0 0	12 0 0	6 0 0	12 0 0	12 0 0
Interest, usually paid by agriculturists, per cent. per annum ...	24	24	24	18 & 24	24	24	18 & 24	18 & 24	18 & 24	24	24	24

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Price of land.

seen that land is much dearer relatively to the assessment in Jhelam and in Chakwál than elsewhere; but in the Pind Dádan Khán hills the price is as high relatively as in Chakwál. The low average for the whole tahsíl is caused by the fact that in the Thal and River Bank Assessment Circles land fetches less than 20 years purchase of the Land Tax. The whole area transferred by sale during six years is very small, and the prices paid are very high; but if the statistics may be trusted, both the area sold and the price per acre have increased largely during the last 15 years. But the rise in price is proportionately much greater than the increase in area. These are the results which might reasonably be expected in a really prosperous district.

Weights and measures.

Difficulty of communication is no doubt one cause of the little trade of the district. Another may perhaps be found in the great difference of the weights and measures in use in different *ilákas*. These differences are shown in the description contained below. It is only approximately correct. Absolute correctness is impossible when differences between measures of capacity have to be expressed in terms of weight. For there is no invariable relation between the cubical content and the weight of those things which are principally measured. Nevertheless the description is sufficiently near the truth for all practical purposes.

Measures of capacity.

Grain in the villages is always trafficked in by measure and not by weight. The measures are sometimes round and sometimes four-sided, and are generally made of either *táli* or *ber* wood. There is no authoritative standard of size or shape; but the *tarkháns* of each *iláka* copy the models already existing there as well as they can. There are consequently nearly always slight variations. The measures are always used heaped. The table on pages 124 and 125 gives the approximate weight of each in rupees=(tolas), This is in accordance with village speech. The weight of course differs with the grain. The table shows the result for wheat, which is always chosen as the standard by the villages themselves. It will be observed that the measures generally grow larger as we go west. As a rule it will be found, where cultivation is rough, land plentiful, and population only fairly thick, that large measures of grain are always used in preference to small ones.

Other very rough measures for Agricultural produce used generally all over the district.

Muth=as much corn as can be cut in one sweep of the *dátri*.

20 *Muths* (or thereabout)= 1 *Satri* or *Káh*.

4 *Satris* (or thereabout)= 1 *Kolláwa* or *Cháta*, which is as much as a man can lift up between his outspread arms. In some places he is allowed to stack up the grain on his shoulders and head, but this is not universal.

Gaddi or Bhári=a sheaf of corn which is bound up together. It varies much in size.

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Prices of food grains.

Term.		Wheat.				Gram.				Tara Mira.				Mustard.				Bajra.				Moth.				Cotton.				Gur
		Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwál.	Talagang.	Pind Dádan Khán.	Jhelam.	Chakwal.	Talagang.	Pind Dádan Khán.
Per cent. of cultivated area under each staple		62·2	47·8	58·4	63·0	6	·4	3·4	7·3	3·4	6·6	6·8	5·7	·1	·8	·1	·7	21·2	26·4	20·2	16·3	1·0	10·8	4·0	0·9	2·8	2·0	2·6	3.6	·2
A. D. 1833—46	Sérs per rupee.	37	48	50	53	35	46	60	66	55	54	49	51	30	46	30	44	51	61	56	65	45	65	63	76	15	18	17	12	12
" 1847—52		42	47	47	47	32	44	56	56	45	53	44	43	28	49	26	35	53	63	59	48	38	70	64	56	15	17	15	10	11
" 1853—60		40	49	47	5[illegible]	44	46	56	62	44	52	43	51	31	47	29	39	50	56	52	41	51	67	57	60	17	17	15	11	16
" 1861—65		35	34	31	41	33	31	37	48	32	31	31	38	20	26	21	31	43	36	35	39	35	44	38	49	9	10	10	8	11
" 1866—70		21	24	25	27	21	22	28	28	23	23	21	26	17	18	14	22	23	25	24	28	22	27	26	36	10	12	9	8	9
" 1871—75		28	28	27	33	30	25	34	40	25	23	24	31	16	20	16	26	44	35	34	41	40	41	37	50	12	11	10	9	12
" 1876		41	36	44	44	45	50	55	62	35	27	38	42	25	27	26	28	52	46	56	55	49	45	56	60	12	10	10	12	13
Average of whole period of 44 years ...		35	41	38	45	34	39	49	55	42	43	39	43	26	38	25	35	45	50	44	48	41	53	52	59	14	15	14	10	12

Chapter IV, C.

Prices, Weights and Measures, and Communications.

Measures of capacity.

Measures of capacity current in Jhelam district.

Tahsil.	*Ilákas* in which the measurement is the same.	Name of the lower measures which make the larger ones.	Weight of the lower measure in rupees.	No. of the lower measure equal to the large measure.	Name of the large measure.
Jhelam.	Pabbi ... ... Dhorála ... ... Lehri	Paropi or Kachchi ...	37½	4	Chohá.
		Chohá	150	4	Topá.
		Topa	600	4	Pái
		Pái	2,400	10	Máni.
		Máni	24,000	...	
	Jhelam ... ... Askandrála ... Tuliála ... ... Pakhwál ... ... Kála ... ... Sanghoi ... ... Chautála ... ... Gora ... ... Padhri ... ... Dárapur ... ... Nára	Paropi	35	4	Topa.
		Topa	140	8	Pái.
		Pái	1,120	20	Máni.
		Máni	22,400		
Chakwál.	Babiál ... ... Rupwál (part) ... Saiydpur	Serini	66	3	Chohá.
		Chohá	198	16	Pái.
		Pái	3,168	10	Kharwár.
	Chaupeda (a part of Rupwál), *viz* :— ... Kahár ... ... Chhunbi ... ... Bhaukni ... ... Chakora	Serini	75	3	Chohá.
		Chohá	225	16	Pai.
		Pái	3,600	10	Kharwár.
	Haweli ... ... Kahútáni	Serini	80	3	Chohá
		Chohá	240	16	Pái
		Pái	3,840	10	Karwár
	Dúman ... ... Hasolá	Chautai (*viz.*) Paropi	35	4	Chohá
		Chohá	140	4	Topá
		Topa	560	4	Pái
		Pái	2,240	10	Kharwár.
	Bádshábáni ...	Serini*	70	3	Chohá.
		Do.	66	3	Do.
		Chohá	210	16	Pái
		Do.	198	16	Do.
		Pái	3,360	10	Kharwár.
		Do.	3,168	10	Do.
Talagang.	Pakhar ... ... Miál ... ... Jabbi ... ... Thoha, except— Chaukhandi ... Dhok Báza ... Dhok Hun ...	Paini	65	2	Bunbi.
		Bunbi	130	2	Chohá.
		Chohá	260	20	Man.
	Núrpur ... Kot Sárang except— Muthrála ... Daiwál ... Kot Kalán ...	Paini	55	2	Bunbi.
		Bunbi	110	2	Chohá.
		Chohá	220	20	Man.

* There are two different Serinis.

Measures of capacity current in Jhelam District.—(Concluded.)

Tahsil.	*Ilakas* in which the measurement is the same.	Name of the lower measures which make the larger ones.	Weight of the lower measure in rupees.	No. of the lower measure equal to the large measure.	Name of the large measure.
Talagang.—(*Continued.*)	Talagang, except— Jáhtla ... Pira Faihál ... Kufri ...	Adseri	55	4	Chohá.
		Chohá	220	20	Man.
		Man	4,400	4	Chhat.
	Villages excepted in Kot Sárang (*supra.*)	Páini	50	2	Bunbi.
		Bunbi	100	2	Chohá.
		Chohá	200	20	Man.
	Villages excepted in Talagang (*supra.*)	Adseri	60	4	Chohá.
		Chohá	240	20	Man.
		Man	4,800	4	Chohá.
	Villages excepted in Thoha (*supra.*)	Páini	60	2	Bunbi.
		Bunbi	120	2	Chohá.
		Chohá	240	20	Man.
Pind Dádan Khán.	Kahár ... ... Kahun	Serini	$73\frac{1}{3}$	3	Topa.
		Paropi	$36\frac{2}{3}$	6	Do.
		Páini	$18\frac{1}{3}$	12	Do.
		Topa	220	4	Pái.
		Pái	880	5	Man.
	Jhangar	Serini	$53\frac{1}{3}$	3	Topa.
		Topa	160	4	Pái.
		Pái	640	5	Man.
	Jálap ... ... Pinn Dádan Khán ...	Serini	$53\frac{1}{3}$	3	Topa.
		Adseri	$26\frac{2}{3}$	6	Do.
		Páini	$13\frac{1}{3}$	12	Do.
		Topa	160	4	Pái.
		Pái	640	4	Man.
		Man	2,560	10	Kharwár.
	Ahmadábád ...	Serini	$73\frac{1}{3}$	3	Topa.
		Paropi	$36\frac{2}{3}$	6	Do.
		Topa	220	4	Pái.
		Pái	880	5	Man.
	Jalálpur	Paropi	40	4	Topa.
		Ser	$53\frac{1}{3}$	3	Do.
		Topa	160	4	Pái.
		Pai	640	4	Man or Maund
		Man	2,560	10	Kharwár.

For Straw—

1 *Pand*=what can be tied up in a *bhurá*, which is generally a cloth about 4 *gaz* by $1\frac{3}{4}$. The *gaz* is now generally about the same as the English yard. This cloth, however, is differently tied. At harvesting when loading the straw on pack animals, a *Pand* is made to be equal to about $1\frac{1}{2}$ maunds; but when a man carries it on his own head, it is about 27 seers.

2 *Pand*=1 *Chilli*, which is about three maunds, and = a pack load.

Chapter IV, C.

Prices, Weights and Measures, and Communications.

Measures of weight;

Measures of Weight.

Measures.	Remarks.
3 Sirsáhis=1 Chittack=5 Tolas. 10 Tolas=1 Adhpao. 2 Adhpaos=1 Pao. 2 Paos=1 Adhser. 2 Adhsers=1 Ser. 2 Sers=1 Doseri. 2½ Sers=1 Dhaya. 2 Dhayas=1 Panjseri. 8 Panjseris=1 Man.	Grain is hardly ever sold by weight except in the large towns. Flour, *ghi*, *gur*, and the like are, however, all sold by weight. The table given is the ordinary one, and is in general use. In a good many places in Jhelam tahsíl and in most places in tahsíl Chakwál the ser in use is that of Bahadar Sháh=75 tolas, with all the other measures in proportion. But the tendency is to adopt the Government ser of 80 tolas everywhere. This has been especially the case during the last few years when there has been such an influx of strangers into the district.

Linear and Square Measures.

Length;

Area.

Measures.	Remarks.
Linear Measure. 4 Unglis =1 Chappa. 3 Chappas=1 Gith=4 Giras. 2 Giths =1 Háth. 2 Háths =1 Gaz. 3 Haths =1 Karam. 1 Karam =1 5½ feet English.	The only real linear measure for land is the *karam*. The *girs* and the *gaz* are used for carpentry and cloth-selling, &c. The other measures given are merely village reckonings without any standard and subject to all sorts of variation. An *ungli* is the width of a finger. A *chappa* is the width of the four fingers laid together. The other terms require no explanation. There is no measure between the *karam* and the *kos*, which is often stated to be 1,400 *karams*. 1,200 *karams* is about the length in practice. The *kos* in this district is generally about four-thirds of a mile. Most lambardars know the English word mile, and can estimate its length with fair accuracy.
Square Measure. 9 Square Karams =1 Marla. 20 Marlas =1 Kanál. 4 Kanáls =1 Bígha. 2 Bíghas =1 Ghumáo.	This is the ordinary village measure, and it has also been used throughout the present and past Settlements. It will be seen that the *marla* is precisely equal to a square Pole English; that a *kanál* is half a Rood, a *bigha* two Roods, and a *ghumao* a Statute Acre.

Communications.

Communications.	Miles
Navigable rivers	127
Railway	33
Metalled roads	28
Unmetalled roads... ...	882

The figures in the margin show the communications of the district as returned in quinquennial Table I of the Administration Report 1878-79, while Table XLVI shows the distances from place to place as authoritatively fixed for the purpose of calculating travelling allowances. Table No. XIX shows the area taken up by Government, for communications in the district.

Communications in the district are as a rule not good. This is owing to the physical difficulties of the country. The Northern State Railway crosses the south-east corner of the district. Much of the traffic between Pind Dádan Khán and Jhelam now makes the long circuit by rail, *viá* Lála Músa to Miáni. The Sángar hills are crossed by a winding route some distance to the east of the old route through

Chapter IV, C.

Prices, Weights and Measures, and Communications.

Communications.

the Rohtás pass. The northern spur of the Salt Range, the Nílí hills, are crossed by a pass through which an affluent of the Kohan *nallah* finds its way. Throughout the district the road winds its way over rough ground broken by ravines. The Grand Trunk Road also crosses the district in close proximity to the Railway, and this is the only road which is generally passable for wheeled traffic. There are only 103 carts in the district. Everywhere else merchandize is carried upon pack animals—camels, bullocks, ponies, mules, and donkeys. In many places the roads are so bad that these animals cannot be at all heavily laden. The only route upon which there is much continuous traffic is that leading from Pind Dádan Khán *viá* Khewra to Chakwál and the Potwár. Along this, strings of bullocks laden with salt and piece-goods move pretty regularly. The main lines of road are nearly all unmetalled. Most of them have numerous gradients of excessive steepness,—especially where they dip down into a ravine, and then clamber out of it. Often—in the more secluded tracts—they are intolerably stony.

Rivers.

The Jhelam is navigable for country craft up to a point about ten miles above the town of Jhelam, or for 85 miles out of the total distance through which it fronts the district. The depth of water is about 15 feet in summer and 9 feet in winter. The country boats carry loads varying with the season and the depth of water, from five to 25 tons in the winter, and from 25 to 50 in the summer. The principal traffic on this river, as stated in the Panjáb Famine Report (1879), is shown in Table No. XXV. The mooring places and ferries and the distances between them are shown below, following the downward course of the river :—

River.	Stations.	Distance. in miles.	Remarks.
	Dhangrot	...	Ferry and mooring place.
	Mangla	7	Ditto.
	Gatolia	12	Ferry only.
	Pind Ratwal	4	Ferry newly opened.
Jhelam ...	Jhelam	5	Railway Bridge, a Boat-bridge and a mooring place.
	Kot Basira	3	
	Kohar	4	Ferry.
	Puram	5	Do.
	Rasúl	5	Do.
	Mariala	6	Do.
	Jalálpur	6	Do.
	Jaitipur	9	Do.
	Chak Nizám	6	
	Pind Dádan Khán ...	6	A mooring place and bridge of boats.
	Ahmadábád ...	14	

There is a Railway Bridge across the river at Jhelam, with an underway for animals and foot passengers. The bridge is very rigid but not very strong, having been originally designed for a Railway on the metre gauge. The cost of the bridge including some protective works was £139,502, taking one rupee as equal to 1*s.* 9*d.* This is at the rate of £28-11*s.* per lineal foot.

Railways.

The Panjáb Northern State Railway, which is constructed from Lahore to Peshawar, runs across the south-eastern corner of the district, having stations at Jhelam, Diná (ten miles), Domeli (nine miles), Soháwa (nine miles); while a short division connects the Khewra Salt Mines with Miáni on the Salt Branch of the Railway.

Chapter IV, C.

Prices, Weights and Measures, and Communications.

Roads, rest-houses, and encamping grounds.

One main line of road starts from Jhelam and travels *viá* Rohtás and Adrána to Chakwál. Thence it is continued on to Talagang, and from there to Taman, with a branch to Láwa. It is a fairly good road except where it crosses the Tilla Range near Rohtás and the Nílí hills through *rakh* Baráli. A second line branches off from the former near Rohtás, and crosses the Khuddar country to Phadiál. Here it mounts into the Salt Range by an exceedingly steep incline. Arrived at the interior upland, it runs due west across Jhanger and Kahun, and then escapes into the Talagang tahsíl through the break in the hills above Kallar Kahár. At Talagang it rejoins the former route. Travellers from Pind Dádan Khán to Talagang take this road from Choya Saidan Sháh. A third route runs straight from Jhelam to Pind Dádan Khán, and so on to Lilla and Kandowál, with a branch to Ahmadábád. It is a very good road except for ten miles beyond Dárapur. The fourth and last really good road in the district crosses the Salt Range from Pind Dádan Khán to Chakwál, and then passes on to Mandrá in the Ráwalpindi District. This is the only comfortable route directly across the Salt Range. The various bungalows, rest-houses, and serais are shown below. The serais at Dína, Soháwa, Sangoi, Dárapur, Jalálpur, and Dharíalá have European accommodation. A new rest-house has just been built half way up the hill road to Tilla. There are two bungalows on the top of Tilla, which are much used in the hot weather. There is no water on the mountain.

The following table shows the principal roads of the district together with the halting places on some of them; likewise the conveniences for European travellers to be found at most of the stages:—

Route.	Halting place.	Distance in miles.	Remarks.
Jhelam to Shahpur.	Saugoi	9	Unmetalled road, a serai and rest house.
	Chukri	9	Do. no accommodation for travellers.
	Jalálpur	12	Do. a serai and encamping ground.
	Dhariála	10	Do. a serai but no encamping ground.
	Pind Dádan Khán	11	Do. a serai and rest house.
Jhelam to Bannu.	Dina	12	Metalled road, encamping ground, serai.
	Sohawa	14	Do. do.
	Bulbul khurd ...	14	Unmetalled road, no encamping ground.
	Amirpur Mengun ...	14	Do. do.
	Chakwál	13	Do. a rest house and encamping ground.
	Bal Bikhari ...	12	Do no encamping ground.
	Talagang	12	A rest house but no encamping ground.
	Sangwala	11	Unmetalled road.
	Taman	8	A rest house.
	Shah Muhammadwáli	11	Unmetalled road.
Jhelam to Chakwál.	Rohtás	9	A rest house.
	Aditana	10	*Nil*
	Dhok Nakha ...	11	
	Duman	10	A rest house.
	Chakwál	13	Do.
Jhelam to Talagang.	Rohtás	9	
	Baragawa	13	
	Phadial	13	
	Choya Saidan Shah	14	
	Dalálpur	8	
	Kallar kahar ...	10	
	Bhirpur	9	
	Talagang	10	Rest house.
Grand Trunk Road.	Dina	12	Metalled road, encamping ground. Serai and rest house.
	Sohawa	14	Do.

Chapter IV, C.

Prices, Weights and Measures, and Communications.

The road from Jhelam to Pind Dádan Khán crosses the sandy bed of the Gahn and Banba rivers a mile wide in dry weather, but quite impassable after heavy rain.

The dâk bungalows are completely furnished and provided with servants. The rest houses have furniture, crockery and cooking utensils, but no servants.

Post Offices.

There are Imperial Post Offices at Jhelam, Ahmedábád, Bhown, Chakwál, Choya Saidan Sháh, Domeli, Duman Dina, Dalwál, Jalálpur, Khewra, Kallar Kahar, Nila, Pind Dádan Khán, Sohâwa, Sangoi, Talagang and Tummun. The above Post Offices have Money Order and Savings Bank transactions.

Telegraph.

A line of telegraph runs along the whole length of the Railway with a Telegraph Office at each station; there is also an Imperial Telegraph Office in the Cantonment of Jhelam.

CHAPTER V.

ADMINISTRATION AND FINANCE.

SECTION A — GENERAL AND MILITARY.

Chapter V, A.

General and Military.

Executive and Judicial.

The Jhelam district is under the control of the Commissioner of Ráwalpindi, who is assisted by an Additional Commissioner stationed at Lahore. The ordinary head-quarters staff of the district consists of a Deputy Commissioner, a Judicial Assistant and an Assistant Commissioner. An Assistant Commissioner is posted at Pind Dádan Khán in charge of the sub-division. Each tahsíl is in charge of a *tahsíldár* assisted by a *náib.* The village revenue staff is shown in the margin. The Punjab Government have directed that the *patwárí* cess be retained at 4 per cent. throughout the district, that the proceeds be funded, and the *patwárís* be paid in grades. The grading is separate for each tahsíl. Three *girdáwars* with maximum pay and allowances of Rs. 20 per mensem each have been sanctioned for each tahsíl; of these one is the *naíb-kánúngo* and receives the greater part of his allowance from Government; the other two are paid from the *patwárí* fund. Each *girdáwar* has a defined charge, and all three are supervised by the tahsíl *kánúngo.* There are four *patwárí* grades, and the pay varies from Rs. 8 to 13 per month giving an average of Rs. 10.

Tahsíl.	Quanugoes and Náibs.	Girdáwars.	Patwárís and Assistants.
Jhelam	3	2	63
Pind Dádan Khán...	2	2	58
Chakwál ...	2	2	61
Talagang ...	2	2	41

There are three *munsiffs* in the district; two have jurisdiction within the Jhelam and Pind Dádan Khán tahsíls respectively; the jurisdiction of the third includes tahsíls Chakwál and Talagang. This distribution of work is varied during a few months in the summer, when one of the *munsiffs* is required at Murree in the Ráwalpindi district owing to the large influx of visitors to that sanitarium in the hot season. The statistics of civil and revenue litigation for the last five years are given in Table No. XXXIX. The table on the opposite page shows the number and value of the civil suits disposed of during the three years, 1878-79, 1879-80, 1880-81, excluding those brought in Settlement Courts.

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Executive and Judicial.

Years.	Suits brought by		Total number of suits.	Value in Rs.
	Bankers and shopkeepers against agriculturists for parole or bond debts, or accounts stated, and the like.	All others.		
1878	2,871	1,833	4,704	2,67,883
1879	2,715	2,025	4,740	3,04,298
1880	2,735	2,734	5,469	3,35,504
Total	8,321	6,592	14,913	9,37,685

Criminal, Police and Gaols.

There is no Cantonment Magistrate nor Honorary Magistrate in this district. The police force is controlled by a District Superintendent and one assistant, the former is stationed at the head-quarters and the latter in the Pind Dádan Khán sub-division. The strength of the force as given in Table I of the Police Report for 1882-83 is shown in the margin. In addition to this force 435 village watchmen are entertained and paid from the amount collected for the purpose from each *zamindár* residing in a village. The following table shows the police stations and out-posts. It is to be noted that the tahsíl and *thána* boundaries do not always correspond. Thus Kallar Kahár *thána* is partly in Pind Dádan Khán tahsíl and partly in Chakwál; and *thána* Jalálpur partly in Pind Dádan Khán and partly in Jhelam tahsíl. There are also other minor instances:—

Class of police.	Total strength	Distribution.	
		Standing guards.	Protection and detection.
District (Imperial) ...	403	87	316
Cantonment	8	...	8
Municipal	104	...	104
Total	515	87	428

Tahsíls.	*Thánas.*	*Chaukís*, subordinate to each *thána.*
Jhelam.	1. Jhelam Sadr ...	(*a*) Cantonment; (*b*) Camping Ground; (*c*) Gújarpur (by Kála); (*d*) Rathian.
	2. Jhelam Police Lines.	
	3. Jhelam City ...	(*a*) Ferry.
	4. Dina	(*a*) Bura Jangal; (*b*) Ratiál; (*c*) Chakoha.
	5. Soháwa	(*a*) Pind Matta Khán; (*b*) Dhok Mochián.
	6. Domeli	
P. Dádan Khán.	7. Pind Dádan Khán Sadr	(*a*) Ferry; (*b*) Choya Saidan Sháh.
	8. Pind Dádan Khán City.	
	9. Ahmedábád.	
	10. Jalálpur.	
Chakwál.	11. Chakwál	(*a*) City Chauki; (*b*) Nila.
	12. Duman.	
	13. Kallar Kahár.	
Talagang.	14. Talagang	City Chauki.
	15. Taman	Láwa.

Chapter V, A.

General and Military.

Criminal, Police and Goals.

An Assistant District Superintendent is generally stationed at Pind Dádan Khán, who is charged with the control of the *thánas* of that tahsíl and of tahsíl Talagang, including the *thána* of Kallar Kahár.

There is a cattle-pound at each *thána* and also at Dhurriala, Bhon, Dulwál and Sangoi. The district lies within the Ráwalpindi Police Circle under the control of the Deputy Inspector-General of Police at Ráwalpindi.

The District Gaol at head-quarters contains accommodation for 362 prisoners. Table No. XL gives statistics of criminal trials, Table No. XLI of police inquiries, and Table No. XLII of convicts in jail for the last five years.

There are no criminal tribes in the district; but the inhabitants of the Chakwál and Talagang tahsíls, notably of the former, are much addicted to crimes of violence; especially the tribe of Awáns, among whom human life is held of small account. Crimes for plunder are comparatively rare.

Revenue, Taxation and Registration.

The gross revenue collections of the district for the last 14 years, so far as they are made by the Financial Commissioner, are shown in Table No. XXVIII, while Tables Nos. XXIX, XXXV, XXXIV and XXXIII, give further details for land revenue, excise, license tax and stamps respectively. Table No. XXXIIIA shows the number and situation of Registration Offices. The central distilleries for the manufacture of country liquor are situated at Jhelam, Chakwál and Pind Dádan Khán. The cultivation of the poppy subject to certain rules, is allowed in the district. The administration of Customs and Salt revenue is described in the next paragraph.

Table No. XXXVI gives the income and expenditure from district funds, which are controlled by a committee consisting of 109 members, selected by the Deputy Commissioner from among leading men of the various tahsíls, and of the Civil Surgeon, the District Superintendent of Police, Head Master of District School, and tahsildár as ex-officio members, and the Deputy Commissioner as President.

Table No. XLV gives statistics for municipal taxation, while the Municipalities themselves are noticed in Chapter VI. The income from provincial properties for the last five years is shown below :—

Source of Income.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
Ferries with boat-bridges ...	27,535	28,275	47,471	50,429	31,908
Ferries without boat-bridges ...	7,455	6,516	7,325	7,936	8,262
Staging bungalows, &c. ...	2,749	2,938	1,269	752	915
Encamping-grounds ...	1,772	1,725	1,621	973	807
Cattle-pounds	4,016	4,739	4,775	3,384	2,772
Nazúl properties	1,210	2,158	1,732	1,354	1,008
Total	44,737	46,346	64,193	64,828	45,672

The ferries, bungalows and encamping ground have already been noticed at pages 127—129 and the cattle-pounds under the last sub-heading. The figures for other Government estates are given in Table

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General and Military.

XVII, and they and their proceeds are noticed in the succeeding section of this chapter, in which the land revenue administration of the district is treated of.

There are no *nazúl* buildings or land of value in the district, except a curious old gateway in the Rohtás fort which is surmounted by some apartments fitted up as a travellers' rest-house.

Statistics of land revenue.

Table No. XXIX gives figures for the principal items and the totals of land revenue collections since 1868-69. The remaining items for 1880-81 and 1881-82 are shown below:—

Source of revenue.	1880-81	1881-82.
Surplus warrant *talabánah*	219	594
Málikána, or proprietary dues	28	30
Fisheries	60	110
Gold washings	268	264
Water mills	174	168
Revenue fines and forfeitures	64	39
Other items of miscellaneous land revenue ...	715	1,800

Table No. XXXI gives details of balances, remissions, and agricultural advances for the last fourteen years; Table No. XXX shows the amount of assigned land revenue; while Table No. XIV gives the areas upon which the present land revenue of the district is assessed. Further details as to the basis, incidence, and working of the current Settlement will be found below in Section B of this Chapter.

Education.

Table No. XXXVII supplies figures for the Government and aided, middle and primary schools of the district. The Government school is at Jhelam; there are middle schools for boys at Rohtás, Chakwál, Pind Dádan Khán and Talagang; the primary schools are situated at Kála, Domeli, Sangoi, Baragawá, Chautála, Dárapur, Málot, Myra, Surug Dhan, Bishundor and Lahri in the Jhelam tahsíl; at Bhaon, Kuriála, Rupwál, Dharugi, Bal Kassar, Murid Hassola, Dudial and Badsháhani in the Chakwál táhsíl; and at Dhariála, Ahmadábad, Haripur, Khewra, Jalálpur, Dalwál, Dulmial, Pindi, Saidpur, Nurpur, Choya Saidan Shah, Waháli, and Saowál in the Pind Dádan Khán tahsíl. There are no primary schools in the Talagang tahsíl.

Place.	Number of Schools.	Average Attendance.
Jhelam ...	2	60
Singhoi ...	1	21
Chotála ...	1	22
Chakwál ...	1	45
Barwál ...	1	23
Sarkat ...	1	26
Saidpur ...	1	26
Talagang ...	1	35
Kufree ...	1	23
Jabbi ...	1	32
Láwa ...	1	22

Girls' schools aided by Government exist in the district at the places shown in the margin. The schools are under the Inspector of Schools of the Ráwalpindi Circle. Table No. XIII gives statistics of education collected at the Census of 1881, while the general state of education has been discussed at page 65.

In addition to the Government and aided schools mentioned above, there are four mission schools for girls at the town of Jhelam, the average daily attendance being 97 girls. In addition to these there are 1,160 indigenous schools in 721 villages,

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maintained by private contributions, which are attended by boys numbering 13,863. In these schools the boys are taught a smattering of Persian and Arabic, principally the *Kurán*, the education being of a very low standard.

District School.

The Jhelam district school was founded as a vernacular school in 1855. It was made a district school, and an English department added to it in 1860. In November 1861 it was made over to the mission as an aided mission school, but was resumed by Government in August 1870. It occupies a *pakka* building just outside the town. The staff consists of three English and two vernacular masters paid from Imperial, and two English, one arithmetic, and five vernacular teachers paid from local funds. The marginal figures show its working for the past five years.

Figures showing					
Year.	Expenditure.	Number of pupils.	Results as shewn by examination. Number passed.		
			Lower primary.	Upper primary.	Middle.
1878-79 ...	...*	209	23	...	6
1879-80 ...	4,291	220	32	21	4
1880-81 ...	4,080	243	21	9	3
1881-82 ...	4,828	288	41	21	5
1882-83 ...	4,988	290	43	33	8

Medical.

Table No. XXXVIII gives separate figures for the last five years for each of the dispensaries of the district, which are under the general control of the Civil Surgeon and in the immediate charge of Assistant Surgeons at Pind Dádan Khán and Chakwál, and of Hospital Assistants at Talagang and Jhelam. One of the Regimental Surgeons at Jhelam has collateral medical charge of the civil station and district. There are also many *hakíms* practising privately, and not a few quack dealers in charms and nostrums. Municipal Conservancy and Government Vaccination are the only active sanitary measures enforced in the district. The population, however, is generally a healthy one; although, like most others in the Punjáb, liable to suffer from short and sudden epidemics, which commit great ravages, and cause an abnormal rise in the death-rate.

The dispensary of the Sadr Station was opened in 1858. It is situated in the northern outskirts of the town, and consists of one female and one male ward, the former capable of accommodating fourteen, and the latter four patients. The staff consists of a Hospital Assistant, compounder, dresser, and the usual menial servants.

Ecclesiastical.

St. John's Church, of medium size, of handsome architecture with a fine steeple, is situated on the banks of the river within the boundaries of the Jhelam Cantonments. The building is capable of

* Not known.

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General and Military.

Ecclesiastical.

accommodating from 120 to 130 persons. An Episcopal Chaplain is posted here belonging to the Additional Clergy Society, who periodically pays pastoral visits to Gujrát, Sháhpur, and the small posts of English residents in the Salt Range. The Roman Catholic priest from Ráwalpindi occasionally visits his small flock at Jhelam, and holds his services in the Railway Institute. There is an American Missionary stationed at the head-quarters of the district; also a Church of England Mission at Pind Dádan Khán founded by the late Rev. Mr. Gordon who fell at Kandahár during the last Afghán war.

Cantonments, Troops, &c.

The only military station in the district is the Cantonment of Jhelam, situated a mile from the Civil Lines and the City. The garrison of Jhelam consists of a Native Cavalry and a Native Infantry Regiment. The Cantonment belongs to the Ráwalpindi Division, and the troops are under the command of the General Officer Commanding at that station. The total garrison of the district, as it stood in August 1883, is shown in the margin. The figures have been obtained from the Officer Commanding the station, and include those who were sick or absent at the time. The Native Infantry is the only regiment that is provided with available transport; this consists of 63 camels and 32 mules. There are no military defensive works at the Cantonment, with the exception of a magazine which is not now occupied for military purposes.

Station.	Regimental and Staff Officers.	Artillery.	British Cavalry.	Native Cavalry.	British Infantry.	Native Infantry.
Jhelam.	50	...	...	537	..	815

The strength of the 1st Punjab Volunteers on the 1st August, 1883, was 55; the corps is recruited solely from the employés of the Punjab Northern State Railway stationed at Jhelam.

Head-Quarters of other departments.

The portion of the Punjab Northern State Railway which runs through the district is in charge of the District Traffic Superintendent at Ráwalpindi, while the Manager at Ráwalpindi controls the entire line of the Punjab Northern State Railway from Lahore to Pesháwar. His office is also at Ráwalpindi.

The Grand Trunk Road north and south of Jhelam is under the Executive Engineers, General Branch, Provincial Division, at Ráwalpindi and Lahore, respectively; the former of whom has charge of the public buildings of the district, while both are subordinate to the Superintending Engineer, First Circle, at Ráwalpindi.

The military buildings are also in charge of the Executive Engineer, Provincial Division, at Ráwalpindi, and the Superintending Engineer, First Circle.

The telegraph lines and office of the district are controlled by the Telegraph Superintendent at Lahore, and the Post Offices by the Superintendent of Post Offices at Ráwalpindi. The Customs

Chapter V, B.
Land and Land Revenue.
Head-quarters of other departments.

(Salt) Staff is under the control of the Assistant Commissioner of Customs at Khewra, and the Forests under that of the Assistant Conservator of the Jhelam Division, quartered at Jhelam.

SECTION B.—LAND AND LAND REVENUE.

Revenue history up to the current Settlement.

Sikh revenue system.

Mr. Brandreth thus describes the system under which the Sikhs assessed and collected their land revenue:—

"In the Sikh time the cultivators usually paid by what was called the *bigha** rate; the *kárdár* and the appraisers of the crops would select a fair field and very fairly calculate the produce by the eye; a deduction of one-tenth would be made for the village servants, and half the rest taken as the Government share. The field would then be roughly measured by a man's paces, or the area guessed; they can do this with unusual accuracy; the produce per *bigha* of this field was thus calculated as an average *bigha*; the *kárdár* would afterwards visit each field of each owner, examine the standing crops and assess it as equal to so many average *bighas*. It was here that the owners gained; they were, it is true, allowed nothing from their cultivators, except where they were a very powerful body, and had to be conciliated, but their headman accompanied the *kárdár*, and by assessing the cultivators highly, induced the *kárdár* to treat their own fields with considerable leniency: of course, a system like this gave enormous opportunities for fraud and favouritism.

"The number of *bighas* agreed upon was entered against each man, and as soon as the price of grain for the harvest was fixed, the value was calculated. And the village money-lender had to advance the whole, or a large portion of the amount to the *kárdár*. The *kárdár* then aided him in collecting the corn from the tenants. When the villagers obtained a fixed contract they followed the same system, only modifying it by fixing the number of average *bighas* each man's land was equal to, and then dividing the sum due by this number, and consequently when they came to make a permanent division they assessed the different sorts of soil as equal to so many *bighas* of the worst soil, and divided the revenue accordingly."

Amount of revenue under the Sikhs.

There is very little trustworthy information as to the amount of the land revenue under the Sikhs. The *kárdárs* took as much as they could get. The professed standard of taxation was one-half of the produce of all tahsíls except Talagang, where it was one-third. These are, and long have been, the customary rents for tenants who pay in kind.

First Summary Settlement.

The first Summary Settlement was made in 1847-48. The assessment was fixed by Major Nicholson in tahsíl Jhelam and in the Lundi Patti, and by Mr. Bowring in the rest of the district. The object aimed at was to make the Government demand an equivalent for two-fifths of the produce; but if the Sikh assessment in any case appeared to be less than this, it was maintained unaltered.

Second Summary Settlement.

In 1852 a second Summary Settlement was made by Major Browne, the Deputy Commissioner. The Government demand was redistributed over the district upon a more equitable basis, and a few

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* A measure = in this district half an acre.

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cases of notorious hardship which had occurred under the first Summary Settlement were corrected. The arrangements made by Major Browne remained in force until 1857-58. After that year they were gradually superseded by the arrangements of the first Regular Settlement.

Working of the Summary Settlements.

On the whole the Summary Settlements may be said to have worked very well in Chakwál and Talagang; and fairly well in the hill tracts of Pind Dádan Khán; but in the Pind Dádan Khán plain, and throughout most parts of tahsíl Jhelam, they were found rather onerous.

First Regular Settlement.

The first Regular Settlement was conducted by Mr. Arthur Brandreth. It commenced in June 1855, and was finally completed in May 1864. The assessment has been elaborately explained by the Settlement Officer in his published report. Speaking generally, it may be said that the demand was so framed as in no case to exceed half assets.

Comparative results of all three Settlements.

The following table exhibits in a compendious form the value of the land revenue under Sikh rule, and under the first three British Settlements. The entries as to the Sikhs must be taken for what they are worth, which is probably not very much. They profess to give the average results of 14 years ending 1847-48. Similarly the entries as to the Summary Settlements are average results deducted from the whole period of the currency of each. *Jágirs, ináms* and *máfís* are always included:—

Tahsil.	Sikh average.	Average of Summary Settlements.		Regular Settlement, 1st year.
		1st.	2nd.	
	Rs.	Rs.	Rs.	Bs.
Jhelam	2,16,644	1,86,148	1,83.397	1.68,720
Chakwál	1,85.599	1.80,468	1,75,861	1,80,489
Talagang	99.698	90.665	87.150	90,468
Pind Dádan Khán	2,06,899	2,06,261	2,05,769	1,82,724
Total ...	7,08,840	6,63,542	6,52,177	6.22,401

Of the revenue payable during the first year of the Regular Settlement Rs. 5,78,050 was receivable by Government, and the balance was alienated to *jágirdárs máfidárs*, or *inám khwárs*.

Working of the first Regular Settlement.

The Regular Settlement was essentially in regard to the assessment, a settlement village by village. Assessment circles were no doubt formed; but they were not much used. In the main the demands were fixed by the personal knowledge of the Settlement Officer, and by his opinion of what each village could afford to pay. He arrived at his conclusions after consideration of a multitude of matters all more or less relevant to the subject of taxation. These assessments undoubtedly worked well. They were in nearly every case paid with ease and regularity, and led to a general increase in the prosperity

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of the district and in the amount of cultivation. Any difficulty or hardship that occurred was due, for the most part, to over-assessment of new lands formed by the river, and under-remission in respect of old lands washed away.

Nature of the seasons during its currency.

There has been no famine in the district since the Regular Settlement was made. The result of an examination of the annual reports is thus stated by Major Wace: "I have endeavoured to ascertain the number of years during the expired Settlement in which the crops have failed wholly or partially. * * * * * * The results are contradictory; and the statistics of the subject in the annual reports are too brief and general to justify my relying exclusively upon them. But the general result of the inquiry seems to be as follows:— The *rabi* crops have been generally good. Chakwál and Talagang had three indifferent harvests, 1868—70; and Jhelam also, 1872—74. The other years were good. Of the *kharif* crops there have been four bad years throughout the district, 1860, 1868, 1873, and 1877. Two or three other crops have also been poor. In every instance the revenue was easily paid. The people say, and I think truly, that the failure of a *kharif* crop does not make famine; and that the failure of a *rabi* crop does." After the above was written in 1878 there were several indifferent harvests and a long spell of high prices. In all cases the revenue was paid without pressure. There was no acute distress; but there was some pinching among the village menials, and the loss in cattle was considerable.

Locusts.

The last time the district suffered materially from locusts was in A.D. 1848 (Sambat 1905), the year of the Sikh war, when they caused great damage in the Pind Dádan Khán tahsíl and western portion of the district.

Alienation of land.

The sales of land have already been discussed in Chapter IV, pages 120, 122. It was there shown that both the area sold and the price per acre have increased largely during the last fifteen years. But the rise in the price is proportionately much greater than the increase in the area. These are the results which might naturally be expected in a really prosperous district. In regard to mortgages the papers of the new measurement show that 1·8 per cent. of the present cultivated area of the district is held on usufructuary mortgage for Rs. 3,40,393, and that 0·2 per cent. is held on mortgage without usufruct for Rs. 39,414. The area mortgaged is exceedingly small in Chakwál, and in that part of Jhelam behind Mount Tilla. It is greatest in the Pind Dádan Khán tahsíl, where it reaches 9·3 per cent. among the Phapra villages, and 5 per cent. in the hills and in the River Bank Assessment Circle. In the Thal it is only 4·1, which is also the value for the River Bank Circle of tahsíl Jhelam. In the Maidán Circle of the same tahsíl it is 2·5 per cent., and 1·8 in tahsíl Talagang. Everywhere else it is less than 1 per cent.

General progress during the first Regular Settlement.

The table on the opposite page gives a general view of the progress of the district during the expired settlement in respect of increase of population, cattle and cultivation.

Tahsíl.	CIRCLE.	Acres cultivated per plough.		Population per square mile cultivated.		Kine per square mile cultivated.		Sheep & goats per square mile cultivated.	
		At last settlement.	At this settlement.	At last settlement.	Now.	At last settlement.	Now.	At last settlement.	Now.
Jhelam.	River Bank	11	8	607	695	382	384	49	78
	Maidán	8	9	515	549	449	365	150	188
	Khuddar	5	8	630	481	644	366	814	582
	Pabbi	6	9	537	481	458	388	486	336
Chakwál.	Lundi Patti	11	10	316	347	313	281	268	185
	Dhanni	14	15	303	302	218	217	243	145
Talagang.	Tahsil	16	19	221	191	253	176	262	124
Pind Dádan Khán.	Hill Circle	8	8	544	564	400	430	458	483
	Thal	11	15	393	322	339	233	168	99
	Phapra	9	9	576	504	321	346	157	152
	River Bank	8	9	923	750	453	443	202	160
Total District	Total T. Jhelam ...	7	9	567	540	485	372	343	319
	Total T. Chakwál ...	13	14	305	312	232	228	247	152
	Total T. Talagang ...	16	19	221	191	253	176	262	124
	Total T. Pind Dadán Khán	9	10	630	552	395	372	282	244
	Total District ...	11	12	399	368	325	269	278	194

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General progress during the first Regular Settlement.

The manner in which the increase in cultivation has been effected, the probability of similar extension in the future, and the necessity for assessing it lightly, are discussed by Major Wace in the passage already quoted in Chapter IV (page 95). Commenting on the above figures, Major Wace writes: "Thus the Jhelam tahsíl has increased 33 per cent. in cultivation, 27 per cent. in population, in kine very little; but the sheep and goats are more by 24 per cent. The Chakwál tahsíl has increased 36 per cent. in cultivation, the same in population, and 33 per cent. in cattle; but its goats and sheep are less by 17 per cent. The Talagang tahsíl has increased 53 per cent. in cultivation, and 32 per cent. in population; the kine number much the same as before, and the sheep and goats have fallen off by 28 per cent. The Pind Dádan Khán tahsíl has increased in cultivation

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General progress during the first Regular Settlement.

41, in population 24, in kine 33, and in sheep and goats 23 per cent. The result for the whole district is an increase in cultivation of 41, in population of 30, and in kine of 17 per cent. The sheep and goats have decreased one per cent. These figures are to be taken with some qualification. For instance, it is probable that the Census of 1855 was not so complete as the later Censuses have been. The counting of the cattle and flocks at last Settlement was not always complete; and the opinion certainly prevails, both among ourselves and among the agriculturists, that the cattle have not increased in proportion to the cultivation—an opinion which the above table contains much to support. And the steady absorption of the grazing areas, partly by the spread of cultivation, and partly by *rakh* enclosures, is unfavourable to the increase of cattle and flocks. The people have not now the same apprehensions about the possible results of their cattle being counted that they had 20 years ago; and I believe that the present enumeration is approximately true on the whole. That it is correct in very instance, specially in the Talagang tahsíl, and in the large and more distant villages, I do not believe. Lastly the general standard of the newly cultivated land is not equal to that of the older cultivation." Since the above was written by Major Wace in 1878 there has probably been little change in the number of sheep and goats; but the Afghán war has more than decimated the camels, and cattle disease, hard-work as baggage animals, insufficient pasture and bad seasons have played great havoc among the kine.

Increase in wells and irrigated area.

The increase in the wells and in the area which they irrigate was also considerable, being 26 per cent. in the number of wells, and 22 per cent. in the area irrigated for the whole district. Though owing to the small proportion of the total cultivated area which is irrigated, the question is not of much importance in this district, still the progress was, so far as it goes, very satisfactory, especially in the River Bank Circle of tahsíl Pind Dádun Khán. No doubt these wells will similarly increase in the next 30 years, but owing to the physical conformation of the district they can never be sunk in the district at large; and must always be confined to the tracts on the banks of the river Jhelam, and to the alluvial fields on the sides of the main *nallas* that drain the district. They might possibly be largely increased in number on the plain round Jhelam and northwards towards Duliál; but here the rains are so steady and sufficient, both in winter and autumn, that the people think increased profits would not repay them for the great expense and labour of well cultivation; and from observation of such wells as exist, Major Wace thinks that in their present circumstances the opinion thus held by them is practically correct.

Rise in prices.

The history of prices since the first Summary Settlement has already been discussed in Chapter IV, pages 119, 120. The following figures show how largely the burden of the assessment of the Regular Settlement has been lightened by the rise in prices during its currency. Prices with merely temporary interruption have moved upward, while the land tax has stood still.

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Rise in prices.

Prices of staples in seers per rupee.

Tahsíl.	Detail.	Wheat.	Gram.	*Tara mira.*	Mustard.	*Bájra.*	*Moth.*	Cotton.	*Gur.*
Pind Dadan Khan.	Per cent. of cultivated area	62·2	·6	3·4	·1	21·2	1·0	2·8	·2
	1853—60	40	44	44	31	50	61	17	16
	1861—75	28	27	27	18	31	32	10	11
	44 years	35	34	42	26	45	41	14	12
Jhelam.	Per cent. of cultivated area	47·8	·4	6·6	·8	26·4	10·8	2·0	...
	1853—60	49	46	52	47	56	67	17	...
	1861—75	29	26	26	21	29	33	10	...
	44 years	41	39	43	38	50	56	15	...
Chakwal.	Per cent. of cultivated area	58·4	3·4	6·8	1·0	20·2	4·0	2·6	...
	1853—60	47	56	43	29	52	57	15	...
	1861—75	27	33	25	17	31	31	9	...
	44 years	38	49	39	25	44	52	14	...
Talagang.	Per cent. of cultivated area	63·0	7·3	5·7	·7	16·3	0·9	3·6	...
	1853—60	50	62	51	39	41	60	11	...
	1861—75	34	39	32	26	36	45	9	...
	44 years	45	55	43	35	48	59	10	...

On these figures Major Wace remarks:—

"In the marginal table I assume the price of wheat to be the principal standard of profit to the agriculturists, as I have no doubt that in this district it really is; and I give first the percentage by which its average price from 1853—60 was cheaper than those which prevailed from 1861—75; I then take the percentage of increase in cultivation in each tahsíl, and add the two together. Or rather, I only take one-third of this increase, in order to make due allowance for the inferiority of new cultivation, and for its progressive growth. The result given in the margin, shows how much lighter the expired Settlement was in its actual working than the Settlement Officer, when he made it, expected that it would prove:—

Tahsil.	Percentage Improvement during currency of expired Settlement.		
	In prices of wheat.	In cultivation.	Total.
Jhelam ...	69	33/3	80
Chakwál ...	74	36/3	86
Talagang ...	47	54/3	65
Pind Dádan Khán...	...	[illegible]	58

"Figures are but too willing handmaids, yet make what deduction we will from the first column of this statement, and a figure of profit will yet

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remain sufficient to make any Settlement work easily, no matter how heavy it was when first made."

The Current Settlement.

Recent revision of Settlement, A. D. 1880.

In December 1874, a revision of Mr. Arthur Brandreth's Regular Settlement was set on foot, under the direction of Major Wace, who held charge till May 1877. Various officers presided over the operations from that month till September 1878, when Mr. Thomson assumed the direction, and completed and reported the Settlement in the cold weather of 1880-81. The assessment of the land-revenue was wholly performed by Major Wace himself, while the forest Settlement was chiefly made by Mr. Thomson.

Assessment Circles.

At the Regular Settlement Mr. Brandreth divided the district into no fewer than 40 Assessment Circles. In framing the Assessment Circles for the present Settlement, Major Wace followed generally the physical divisions of the country which have been indicated in Chapter I. In tahsíl Jhelam the riverain territory was divided into two circles. The first of these, called Kinára Dárya, or river bank, comprised all villages lying on the bank of the river, or so near to it as to receive benefit by moisture or percolation from the stream. All the remainder of the riverain was placed in the Maidán or plain circle. The upland of the Jhelam tahsíl between the hill ranges of Tilla and Nílí was formed into a third circle called Khuddar or Raviny. And this was so extended as to include a few villages on the river side of Tilla and of the Lehri hills. The last circle in the Jhelam tahsíl was called Pábbi, and comprises the whole tahsíl beyond the Nílí hills. It is a tract of considerable fertility, well supplied with drainage water and with labour, but with a somewhat shallow soil which is here and there vexed with *kallar*. In tahsíl Chakwál there are only two Assessment Circles, *viz.*, Lundi Patti and Dhanni. These correspond to the old political divisions of the country which have been already referred to. Lundi Patti is a strip of about eight miles in width lying on the east border of the tahsíl. It is better populated, better cultivated, and has generally a somewhat better soil than the Dhanni country. The rainfall, too, is somewhat heavier and perhaps more certain. The Dhan Circle, which makes up the rest of the tahsíl, is fairly homogeneous. Some tracts are more sandy, and some more stony than others. But the agriculture is so simple, and so entirely dependent upon a somewhat scanty rainfall, that Major Wace did not think it possible to fix different rates for different parts of this area.

The whole of the Talagang tahsíl was placed in one circle. Major Wace thought the soil to be of fair quality throughout, and that the only great differences were caused by a short rainfall in the west, and by the major part of the very small irrigated area being concentrated in the north. In a country of rough agriculture, and almost altogether relying upon rain, no separate circles seemed to be called for.

In the Pind Dadán Khán tahsíl, Major Wace took the three *ilákas* which together make up the upland of the Salt Range, and

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Assessment Circles.

the valley that lies round Vagh, and formed them into one circle, which was called hills or *pahár*. These tracts have been already noticed in Chapter I of this volume. The riverain territory of Pind Dadán Khán has been described by Mr. Brandreth as divided into three zones. First, there is the tract under the hills which contains few wells, but receives all the benefits of the hill drainage. Secondly, there is an intermediate zone which receives no direct benefit from the river, but in which the level of the subsoil water is high, and where wells can easily and profitably be made, and which contains most of the large wells in the district. This tract almost ceases to exist west of Pind Dadán Khán, and is replaced by a broad strip of barren ground which has been ruined by *kallar shor*. Thirdly, there is the tract on the bank of the river which receives moisture or flood water, and where wells are consequently few. All three tracts form one plain. The *kallar shor* area is of course almost useless, but the rest of the zone of wells is very fertile. The submontane zone is also very good wherever the hill drainage reaches. The river bank zone is good soil, but somewhat sandy and tilled by a population of less industrious habits. Out of this stretch of country Major Wace formed three circles. First, the Thal Circle, comprising everything west of Pind Dadán Khán and outside the affluence of the river. This includes most of the bad *kallar shor* country. The criterion of quality in the villages here is the amount of hill drainage received. The worst villages are, Major Wace thinks, Kahain, Kuchi, Dhudhi, Dangar, Kallo Jattu and Rájsar, which only receive drainage after heavy rains. Generally the eastern part of the circle is of better quality than the west. The second circle formed by Major Wace consists of a cluster of villages lying north-east of Pind Dadán Khán and close under the hills. They are generally large estates of good quality, and owned almost altogether by the Ját tribe known as Phapras. They are entirely dependent on rain or on the hill drainage. But the latter is usually abundant and of a very fertilizing character. The last circle is called Kinára Dárya, but this name is misleading. The circle comprises all the villages affected by the river, but at its eastern end it extends right across the plain country to the foot of the hills, and takes in all the best villages of the zone of wells, and also a good many which belong to the submontane zone.

The table on the next page gives an abstract of the present assessment circles with the corresponding ones of the First Regular Settlement.

Classification of soils.

The various kinds of soils recognised in the district have already been described in Chapter IV (pages 93, 94). For assessment purposes Major Wace classed his soils as (1), irrigated from wells or *cháhi*; (2), land inundated by the river or *sailáb*; (3), land dependent upon rain or *báráni*; the last being again sub-divided into (3*a*) *hail* or manured, (3*b*) *mal, las, ban, &c.*, (3*c*) other lands. The areas of these soils as ascertained by the Settlement measurement (1875-76) are given in Chapter IV (page 94).

Basis of the assessment.

Briefly, since the Regular Settlement which was to be revised, the area of cultivation and the permanent value of agricultural produce

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Assessment Circles.

had each increased by some 40 per cent., population had expanded by at least one-third, and railway communication had lately been extended to the district.

Tahsíl.	Present Circles.	Number of villages	Corresponding old Circles.
Jhelam.	River Bank ...	75	Bhet, Bela, Hail (part).
	Plain ...	191	Hail (part), Dheri, Chachra, Maira, Chhamb Gholar Kahán Lehri (village).
	Knuddar ...	97	Tilla, Khuddar Bhusli, Khuddar Chikni, Goyan, Pahár (Lehri).
	Pabbi ...	73	Susrál, Sohawá, Sugiál.
Chakwál.	Lundi Patti ...	38	Pabbi, Kas, Kulian, Mal (part), Dhoks (except one village).
	Dhanni ...	159	Mal (part), Dhoks (part) Las, Chach, Khas Uchán, Soj, Maira, Babiál, Cháhi.
Talagang.	Whole tahsíl ...	86	Jabbi, Miál, Ankar, Bihán, Vunháds, Maira Tráp.
Pind Dádan Khán.	Hills ...	84	Jhangar, Khun, Vunhár, Vagh.
	Thal ...	31	Dáman Koh (part), Cháhi (part).
	Phapra ...	13	Ditto ditto.
	River Bank ...	82	Bela, Cháhi (part), Dáman Koh (part).
	Total villages ...	179	

Government share of produce.

There being no real cash rents in the district, it was necessary to found the assessment either on a valuation of the usual rents in kind, that is to say, on a produce estimate, or on general deductions from the assessment rates of last Settlement. The assessment instructions directed that the demand for land revenue should not exceed one-half of the share of the produce of an estate ordinarily receivable by the landlord, either in money or in kind. The share of the gross produce ordinarily paid in each tahsíl by tenants-at-will is shown in the marginal statement, along with the proportion assumed as half assets due to Government under the above instructions.

Tahsíl.	PERCENTAGE OF GROSS PRODUCE.	
	Usually received by owners from tenants.	Assumed as Government's due at half assets.
Jhelam ...	}	
Pind Dádan Khán		
Chakwál ...		
Talagang ...		

In the first three instances the exact share would be 22½ per cent.; but the difference between this and one-fourth produce was neglected, because the owner often gets a share of the straw and other minor profits of which the produce estimate took no account.

Prices assumed for valuing produce.

The produce was valued at the average of the prices received by agriculturists during the 44 years ending 1876, which will be found at page 123, Chapter IV. On the subject of these prices Major Wace writes as follows:—

"The Financial Commissioner considered this valuation too lenient, observing that for the two principal staples of wheat and *bájra* the 44-year

Prices assumed for valuing produce.

valuation differed greatly from the more recent values. The 44-year valuation adopted was certainly light, but not to a very material extent, as compared with the values up to that date assumed in the assessments of the Mooltan, Deraját and Pesháwar divisions. In the assessment of those districts wheat had up to 1878 usually been valued at 35 sérs and *bájra* at 40 sérs the rupee. Moreover in 1875 and 1876, just before the famine in Southern India, grain had actually been selling in the district at the values assumed. I mention these circumstances, because I think that the events of the last six years, *viz.*, the famine in the Southern India, the high prices which prevailed in the Northern Punjáb during the Afghán war, and the Railway extension northwards, as also the greater care with which assessment estimates are now prepared, have so altered current views on prices, that it is not easy now to appreciate the position of an officer who five years ago was called on to make an estimate of this nature."

Revenue rates and assessments.

The sanctioned revenue rates and a detailed notice of the actual assessments in each of the Assessment Circles (except Talagang *tahsíl*, which was not divided into circles,) will be found in the Settlement Report for the district. The general results for each tahsíl are summarised below:—

Result, tahsíl Jhelam.

The result for the whole *tahsíl* is an increase on the *jama* of 1877-78 of 16 per cent., or Rs. 26,644, the increase in cultivation being 34 per cent. in the gross, or corrected for the inferior quality of the new land 25 per cent. The former *jama* averaged Rs. 1-4-3 per acre cultivated at the time it was made; and the incidence fell during its currency by increase of cultivation to 14⅔ annas. It now stands at 17 annas. Considering that three-fourths of this cultivation is only average soil, (*vide* marginal table), this is not otherwise than a sufficient assessment. The circumstances of one circle did not admit of an increase; in the other circles the increases taken are 15, 35, and 18 per cent.

* Per cent. of cultivated area of tahsíl Jhelam.	
Cháhí ...	1·2
Sailab ...	3·8
Hail ...	13·1
Las, &c. ...	5·5
Maira, Rakkar...	76·4

Tahsíls Talagang and Chakwál.

The *tahsíls* of Talagang and Chakwál do not represent the same diversity of features as occur in the Jhelam *tahsíl*. The principal results of the re-assessment are shown in the following table:—

	TAHSIL CHAKWAL.		*Tahsil* Talagang.
	Circle Lundi Patti.	Circle Dhanni.	
Jama of 1877-78	38,390	1,39,228	89,007
Amount of new rates	46.473	1,69.733	1 20,014
Actually assessed	46,795	1,70,635	1,20,110
Increase per cent. on *jama* of 1877-78 ...	22	22	34
Increase in cultivation since last Settlement ...	41	36	54
The same corrected according to the quality of the cultivation	31	35	40
Incidence of expired assessment—	Annas.	Annas.	Annas.
(I).—When first introduced per acre then cultivated	17	12⅔	8½
(II).—In 1877-78 on existing cultivation ...	12	9⅓	5½
Incidence of new assessment on existing cultivation	14⅔	11⅓	7½

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Tahsíl Talagang.

As the assessment of this *tahsíl* was raised by one-third, no revenue rate was imposed on the culturable waste, but in the new *khewats* the village-owners have charged one-tenth of the new assessment to culturable waste. Rs. 7,000 of the new assessment has been charged on systems of village shares, or by an even rate on all cultivation alike (including therein some culturable waste), and Rs. 16,000 by differential rates on irrigated (Rs. 4-9-0) and unirrigated (As. 5). The rest (Rs. 97,000) has been charged by soil rates, which compare with the sanctioned revenue rates thus:—

Per acre.		Per cent of cultivated area of circle	Sanctioned revenue rates.	New *khewat* rates.	Old *khewat* rates
			Rs. As. P.	Rs. As. P.	Rs. As. P.
Well-irrigated		1	3 12 0	3 9 0	3 8 0
Unirrigated ...	Manured ..	1	0 14 0	0 11 0	0 10 6
	Moist low-lying lands	10	0 14 0	0 7 0	0 12 6
Other cultivation		88	0 6 0	0 5 0	0 6 0
Culturable waste		..	...	0 1 6	0 1 6

The cultivated area charged with rates in the Assessment Report was 259,000 acres. The area charged in the new *khewat* is 413,000, *viz.*—

	Acres.
Cultivated	529,170
Culturable waste	118,000

The large amount of culturable waste charged in the new *khewats* shows that the village-owners are confident that the present limits of cultivation will soon expand considerably.

Tahsíl Pind Dádan Khán.

The four circles of the Pind Dádan Khán *tahsíl* are of very diverse character. The re-assessment has given the following results in each:—

	Hill Circle.	Phapra.	Thal.	River Bank.
Jama of 1877-78	58,3-5	16,350	35,691	*71,998
Amount of new rates	66,313	18,106	40,283	85,403
Actually assessed	65,960	18,155	39,865	78,220
Increase per cent. on jama of 1877-78 ...	13	11	12	9
Increase in cultivation since last settlement	25	42	64	47
The same corrected according to the quality of the cultivation	24	33	40	33
	Annas.	Annas.	Annas.	Annas.
Incidence of expired Settlement— (I)—When first introduced per acre then cultivated	21½	23¾	19½	29¼
(II)—In 1877-78 on existing cultivation	17¾	17¼	12	21½
Incidence of new assessment on existing cultivation	19½	19¾	13¼	23

General results.

The result of the assessment for the whole district is as follows:—

The net Government demand for 1877-78 was Rs. 5,82,244, so that the new assessment adds Rs. 1,09,978, or 19 per cent. to the Government rent-roll.

* First year of Regular Settlement, Rs. 67,150.

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General results.

Tahsil.	No. of Villages.	Demand of last year of expired Settlement	Demand of New Settlement. Initial.	Final.	Deduct assigned revenue, &c.	Balance or Government revenue.
Jhelam	388	123,890	148,245	148,245	...	...
	48	34,108	40,740	41,110	...	...
		157,998	188,985	189,355	5,190	184,165
Chakwál	198	118,617	144,065	144,065	...	...
	49	59,538	71,596	73,355	...	...
		178,155	215,661	217,430	8,122	209 308
Talagang... ...	58	58,586	76,040	76,040	...	...
	28	30,588	43,475	44,070	...	...
		89,174	119,515	120,110	9,751	110,359
Pind Dadán Khán ...	157	123 839	138,345	138,345	...	...
	54	54,823	62,252	63,855	...	...
		178.662	200,597	202,200	13.810	188,390
Total District ...	...	603,989	724 758	729,095	36,873	692,222

Join.

Cesses.

The cesses levied in addition to the revenue are—

		Rs.	A.	P.
Local rate	... ...	8	5	4
Road cess	... ...	1	0	0
School cess	... ...	1	0	0
Post	... ...	0	8	0
Patwári cess	... ...	4	0	0
Lambardárs' cess	... ...	5	0	0
	Total ...	19	13	4

The only portion of these, excepting local rates, that have been newly imposed are one per cent. of the *patwári* cess and the ½ per cent. postal cess.

Camel *tirni.*

It is worth while mentioning that a camel-grazing tax was levied up to 1881 throughout the district, except in *tahsíl* Jhelam. The receipts had in recent years averaged Rs. 3,100 per annum, the tax being levied by annual enumeration. It was organised on this basis at a time when the Government *rakhs* had not been demarcated; and as its continuance involved difficulties in the management of *rakh* lands—each camel on which *tirni* had been paid being entitled to graze free—the tax was abolished in 1881. Under Government's new orders no camel *tirni* is levied; and camels grazing in Government's *rakhs* will be charged grazing fees on the same system as applies to other cattle.

Term of settlement.

Government's orders on the assessment direct that it be accepted for a term of 20 years, commencing from *kharíf* A.D. 1879-80. The reasons against allowing a longer term were that a difficulty had been felt in recovering at one bound the full increased assessment suggested by extended cultivation, and enhanced prices. Moreover, the Railway extension northwards to Ráwalpindi will materially improve the position of the district as regards prices and traffic. When making the detailed village assessments, Major Wace felt very much embarrassed by the large simultaneous increase, both in prices and in cultivation, with which he had to deal, and in such cases it is

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always a question what amount of enhancement can properly be demanded with reference to the previous circumstances of the village. "While, therefore," he writes, "avoiding too sudden and severe an "increase in the Government's demand, I thought it my duty to re-"commend that the leases should be restricted to 20 years, at the end "of which time I have little doubt that the revenue will again be "enhanced by a fifth, partly on account of prices, and partly on ac-"count of the increase in cultivation which will have occurred in the "interval. And Government accepted this recommendation."

Amount of revenue paid upon each harvest.

The share of the revenue which is payable upon each harvest is fixed by the people themselves. The following table, which shows how this choice has been exercised, is interesting and suggestive :—

Paying.	Villages in					Remarks.
	Jhelam.	Chakwál.	P. D. Khán.	Talagang.	District.	
½ at *Rabi* ...	212	75	20	51	358	Five *rakh* leases among these.
⅗ at *Rabi* ...	226	145	51	37	459	Two ditto.
⅝ at *Rabi* ...	...	29	38	...	67	Ditto.
⅔ at *Rabi* ...	...	1	108	...	109	Five *rakh* leases. The 108 villages are 49 in Pahár, 53 in River Bank, and 6 in Thal. The one village is Mári.
Total ...	438	250	217	86	993	14 *rakh* leases in this total.

Assignments of land revenue.

Table No. XXX shows the number of villages, parts of villages, and plots, and the area of land, of which the revenue is assigned, the amount of that revenue, the period of assignment, and the number of assignees for each *tahsíl* as the figures stood in 1881-82, while the figures on the next page show the nature of the cultivation of which the revenue has been alienated.

Jágirs.

The *jágírs* of the district amount to Rs. 16,801. The principal *jágírdárs* are the Sodhís of Haranpur in Pind Dádan Khán, and the *Chachi sirdár* who lives at Wazírábád, but has large grants in the west of Talagang. All these *jágírdárs* are Sikhs. The most important Muhammadan grant is that which is held in *tahsíl* Jhelam by a branch of the family of Fazldád Khán, the Ghakar Rájá of Domeli.

Place of *Zaildars* taken by *Inam Khwars.*

There are no *zaildars* properly so called, but at the first Regular Settlement a system of cash *ináms* to the leading *chaudrís* was introduced. This answers all the purposes of the *zaildari* system, and is perhaps better adapted to the frame of the district society. The *ináms* were granted to the leading men of each *iláka* on condition of loyalty, good conduct, active aid to the Administration

Assignments of land revenue.

Acreage Statement of Máfis.

Tahsíl.	Assessment Circle.	Barren.	Culturable waste.	Lately abandoned.	Irrigated.	*Sailáb.*	*Hail.*	Low lying or embanked land.	*Maira* and *Rakkar.*	Total.
Jhelam.	River Bank	...	1	...	22	11	11	3	112	160
	Plain	...	...	...	9	...	16	15	174	214
	Khuddar	1	3	...	4	...	25	2	61	96
	Pabbi	...	7	...	2	...	14	...	39	62
Chakwál.	Lundi Patti	2	...	...	9	...	1	...	68	80
	Dhanni	82	132	20	17	...	63	103	2,312	2,729
Talagang.	Tahsil	709	...	...	76	...	...	...	1,976	2,761
Pind Dádan Khán.	River Bank	60	93	...	957	147	10	24	250	1,541
	Phapra	5	7	...	3	...	10	263	80	368
	Thal...	42	83	...	22	6	4	440	88	685
	Hills	34	19	...	53	...	53	365	87	611
Totals.	Tahsíl Jhelam	1	11	...	37	11	66	21	386	532
	Tahsíl Chakwál ...	84	132	20	26	...	64	103	2,380	2,809
	Tahsíl Talagang ...	709	...	...	76	...	...	...	1,976	2,761
	Tahsíl Pind Dádan Khán ...	141	202	...	1,035	153	77	1,092	505	3,205
	Whole district ...	935	345	20	1,174	164	207	1,215	5,247	9,307

Regulation of the *ináms.*

when called upon, and general assistance and countenance to the villagers in schemes for the improvement of land. The last condition is a mere flourish. The whole subject is now regulated by Punjáb Government letter No. 1126, dated 15th October 1879, and addressed to the Settlement Secretary to the Financial Commissioner. In future the *ináms* are to be held during the pleasure of Government, and on condition of good service. As has been the case hitherto, they will in general be heritable by the eldest son of each incumbent. The Commissioner of Ráwalpindi is authorised to sanction successions of this type. In case it is proposed to adopt any other course, reference is to be made to the Financial Commissioner, who will dispose of the matter himself unless he thinks necessary to refer it to Government.

The amount of the existing *ináms* is large, being under the Regular Settlement Rs. 14,907, or 2·04 per cent. of the land revenue. As originally granted, they were nearly all percentages on the then revenue of different villages. It was the intention that these percentages should be maintained, and that any increase in the *jama* of the villages concerned should be followed by a corresponding increase in the *ináms.* This too was the universal expectation of the district, and this the plan followed at the recent Settlement. The enhancement of assessment has accordingly raised the

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value of the old *inám* grants to Rs. 18,180, or 2·49 per cent. of the land revenue. One new *inám* of Rs. 50 per annum has been proposed in the village of Dina Thikrian.

Forest Lands.

Government lands.

Table No. XVII shows the area and income of Government estates; Table No. XVIII gives figures for forests under the Forest Department; while Table No. XIX shows the area of land acquired by Government for public purposes. The forests have already been noticed at page 109—113, and details of area and the like are given below at page 155. The history of forest conservancy in Jhelam is so interesting and withal of such great administrative importance that it will be well to notice it somewhat fully.

Early demarcations.

Long before the advent of British rule it had been a custom of Janjúa Rájás and Sikh *kárdárs* to set aside a suitable area in the hills for a hunting ground or a grass preserve. All Salt Mines were also appropriated by the authorities for the time being. But, except in cases of this kind, the Government claimed no rights over the hill ranges in general, or over the waste areas in the plains, which it did not claim equally over the cultivated land of the oldest villages. The frame-work of society had become so dislocated that the notion of a right was fast losing all meaning.

Proceedings of the Inland Customs Department.

After the annexation of the Panjáb, the first appropriation of waste lands in this district was made by the Inland Customs Department. It does not appear to have been thought necessary to secure the previous sanction of Government. The Customs officials, on their own authority, occupied all the salt sources and established the Government monopoly. They also assumed the exercise of a large but vague preventive jurisdiction throughout the country lying round about the Salt Mines. The tract subjected to this irregular administration was called the Mahál Nimak, but its boundaries were never defined with precision. It was eventually swallowed up and confounded in the large and general demarcation of waste lands which was carried out by Colonel Bristow.

Demarcations of waste land during the first Regular Settlement.

At the first Regular Settlement there does not appear to have been any intention at first to form *rakhs*. In fact whole ranges of hills—more especially in the Jhelam *tahsíl*—were parcelled out among different villages. The boundary marks then put up in many cases remain to this day, but they have ceased to indicate boundaries. During the course of his operations, however, Mr. Brandreth became acutely sensible of the danger of indiscriminate wood-cutting to the general well-being of the district. And at the same time a whole series of ferocious quarrels took place, principally in the Kahár *iláka* as to the boundaries of the hill wastes belonging to different villages. "For 100 miles," writes Mr. Brandreth, "every inch was claimed by four or five opposite parties. No bits of cultivation existed to give any clue, for the land had been too bitterly fought for to allow any chance for the plough. Formerly the Janjúa Rájás undoubtedly held the tracts, as the slopes were commanded by their mountain forts, but latterly they had been pressed hard by the *chaudhris* of Dhanni,

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Demarcations of waste land during the first Regular Settlement.

and the Khokar and Jalúb Rájás of the Pind Dadán Khán plains; while to the west, the Awáns, having conquered both hill and plain, had never been able to agree to a boundary. One decision led to serious bloodshed, and others were sure to lead to still worse fights than this. Under the Sikhs each party had grazed where they pleased, the Rájás were away on service, and the Awáns were too much oppressed to care much for exact boundaries. Still serious fights did occur; and certain places, such as the Bhuchal and Kahár grazing lands, were marked at every corner with the cairns or heaps of stones raised over those killed in fight." To make Government the owner of these wastes seemed to be an easy and advantageous method of stifling the quarrels and of securing protection for the trees and brushwood. Accordingly a large area of hill waste in the Salt Range was declared to be Government preserve; and was for the most part excluded from the village field maps, and demarcated in a rude and insufficient manner. Some other smaller tracts were similarly dealt with.

Other proceedings during the first Regular Settlement.

This was all that was actually done during the first Regular Settlement; but this was felt to be insufficient, and a basis for future operations was laid, by publishing throughout the district, "that all "uncultivated land above three times the amount of cultivation is "Government property, and that Government reserve to themselves the "right of taking it when and wherever it is found necessary." The authority for all these proceedings of the Settlement Officer is to be found in the Circular of the Board of Administration No. 15 of 1852.

General demarcation of waste lands throughout the district, 1865-67.

In 1864 the Panjáb Government issued fresh instructions for a general demarcation of excessive waste in the districts of Jhelam and Sháhpur. The general principle laid down was that all waste in excess of three times the cultivated area should be taken up for Government; but this principle was to be used in an intelligent and not an arithmetical way. Reasonable grazing ground was to be left to the villages in all cases. If the necessities of conservancy rendered this impossible in any instance, then grazing rights over some portion of the demarcated area were to be secured for the suffering village. In 1865 the Deputy Commissioner of Jhelam, Colonel Bristow, carried out these instructions with great rigour. The old demarcations were maintained; in many instances large additions were made to them; a number of new demarcations were formed; all the areas demarcated were properly marked out by boundary pillars; a record of rights was drawn up for each separate *rakh;* at the same time fees for cattle-grazing and wood-cutting were fixed, and a small watch establishment was entertained. Colonel Bristow's proceedings were sanctioned by the Punjáb Government in 1867; and the whole correspondence has been printed and published in the Proceedings of the Forest Department.

Revision by Mr. Ogilvie in *tahsíl* Pind Dadán Khán

In the cold weather of 1870-71 the *rakh* demarcations of the Pind Dadán Khán *tahsíl* were revised by Mr. G. M. Ogilvie, Assistant Commissioner. His instructions, however, do not appear to have permitted him to do more than introduce greater clearness and certainty into the interior administrative arrangements and into the *rakh* records. So far as the extent and use of the *rakhs* were con-

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cerned, nothing new was attempted. Mr. Ogilvie drew up a monograph upon the *rakhs* of this *tahsil*, which has also been published.

Introduction of the Forest Department.

In the same year 1870-71, most of the *rakhs* in the district were transferred from the charge of the Deputy Commissioner to that of the Forest Department. Those which remained under district management, aggregating 41,009 acres, were too small to pay the charges of a watching establishment, and so they ceased to be watched.

Different species of demarcations.

The areas of which Government thus acquired the ownership fall naturally into two great classes—the *rakhs* in the hills and the *rakhs* in the plains. The demarcations of the former class, which is immeasurably the more important, comprised the Nílí hills, the Lehri hills, the entire extent of Mount Tilla, almost the whole of the southern line of the Salt Range, and considerable portions of the northern line also. *Rakhs* in the plains were formed wherever any village appeared to have more waste land than was necessary. One or two *belas* in the river were also appropriated.

Rakhs in the hills.

There can be no doubt that forest conservancy of the main hill ranges was absolutely requisite for the best permanent interests of the district. The hills themselves however offer little inducement to the forester. In many places they are absolutely barren and will always remain so. The localities where trees can be expected to grow are few in number, small in extent, and scattered in position. These ranges are therefore not adapted for plantations; but very many hill sides are covered, more or less plentifully with a hardy brushwood, which in one or two instances may be called luxuriant; and in seasons of good rain the grass is often rich and abundant. To protect the brushwood where it exists, and to produce it where it does not exist, is the utmost that can reasonably be expected from the forest conservancy of these hills. To attain these ends, without undue interference with the pastoral economy of the district, is to deserve the praise of successful administration. To attempt anything more ambitious is to invite failure.

Rakhs in the plains.

Physical considerations chiefly prompted the demarcations in the hills; but the *rakhs* in the plains were in most cases taken up upon purely administrative grounds. At first—during the continuance of Mr. Brandreth's Settlement operations—plain *rakhs* were only formed as a means of putting an end to boundary disputes; but under Colonel Bristow the principle of three acres of waste for one acre of cultivation was enforced. And all waste land that appeared to be in excess of village requirements was declared to be Government forest. It is evident that areas of this kind are upon an entirely different footing from the demarcations in the hills. Yet this distinction was often lost sight of; and the attempt to give one character to all the *rakhs* of the district led subsequently to a good deal of fruitless controversy.

General character of the demarcation of 1865.

The greater part of the demarcation carried out in 1865 was of a sound and sterling character, but what remained was often a legitimate ground of grievance. The actual work of demarcation was abandoned to *patwárís* who were often unintelligent, and not

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General character of the demarcation of 1865.

infrequently corrupt; and the principle which was to guide them in working was one which required to be used with great tenderness and consideration. In the homogeneous villages of the plains, where cultivation and waste lie in large blocks with little intermixture, it may be possible to work with fairness on the general plan of allowing three acres of waste for each acre of cultivation; but it is otherwise in Jhelam. Villages are there often distributed into ten or twenty scattered hamlets. Patches of detached cultivation are even more numerous; and the grazing area is frequently still further broken up by large spaces of irretrievably barren ground, deep ravines, or sandy torrents. To apply arithmetical calculations to a district of this description is dangerous. To apply them successfully requires a good deal of intelligence and large personal knowledge. The *patwáris* to whom the application was trusted, had generally the knowledge, but were often without the intelligence or the desire to use it. The principle of three acres of waste for one of cultivation was not unfrequently degraded into a rule, and applied with formal and mechanical accuracy. Thus it happened that the grazing left to some villages was palpably insufficient. In other cases the boundary lines of large *rakhs* were pressed close up to the homesteads of the villages. The pillars were sometimes actually built in the court-yards of dwelling houses. In some of the smaller *rakhs* the whole demarcation was a kind of burlesque abuse of the Government policy. The village lands were cut into strips by long narrow preserves straggling over the face of the country without apparent object. Or a hundred or hundred and fifty acres of barren rock or sand would be surrounded by pillars and called a Government forest. Not seldom the demarcations—though otherwise useless—were so framed as to act as a tax upon water.

Growth of discontent.

The greater part of Colonel Bristow's demarcation was then most judicious; but unfortunately there were few *rakhs* which were entirely free from these vexatious errors of detail, which excited a discontent that gradually grew more acute as cultivation spread, and the area of free pasture diminished. When the *rakhs* were taken up, we had represented ourselves, so to speak, as trustees intent upon procuring for the people better grazing and a more permanent supply of fuel; but when the Railway from Jehlam to Ráwalpindi was commenced, the wood of entire *rakhs* was felled to supply the demands of the engineers. As a consequence, these *rakhs* were closed against grazing. The people, who had little belief in our real desire for conservancy, were accustomed to remark keenly upon the difference between our profession and our practice, and but few of them were able to appreciate the reasons which had occasioned it. These discontents were aggravated by the general method of administration which was neither sympathetic nor very judicious.

Remedies: The new Forest Settlement.

As long ago as 1875 the evils connected with the Jhelam *rakhs* had attracted attention. Some partial measures of relief were from time to time attempted; and at last in 1878-79 it was resolved to deal with the whole subject under the provisions of the Indian Forest Act, 1878, which had then recently been passed. Accordingly

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Classification of the *rakhs*.

in 1879 Mr. Thomson was appointed Forest Settlement Officer in addition to his other duties.

The first object attained by the Forest Settlement was the proper classification of the district *rakhs*. Each *rakh* was carefully inspected, and its capabilities for forest purposes discussed in a separate report. Every area which on account of its large size, freedom from private rights, important situation, or natural productiveness, seemed to be marked out for permanent afforestation, has been constituted a Reserved Forest under Chapter II of the Indian Forest Act, 1878; and, in every case, the administration of Reserved Forests has been entrusted to the Forest Department. When these Reserved Forests had been selected, there still remained a large number of *rakhs* which were all unfit for permanent forest lands. Some of them were small, petty, or really vexatious demarcations, which ought never to have been made, and which were of little or no value. These *rakhs* were abolished, and the lands composing them were restored to the villages from which they had been taken; but other *rakhs* remained, not fit to be made Reserved Forests, yet not unuseful for the general purposes of Government. And a few were so situated that their temporary retention was inevitable, although in the future it may be thought wise to abolish them also. *Rakhs* of these descriptions were constituted as Government waste lands under section 48 of the Punjáb Laws Act, and are managed by the Deputy Commissioner.

Revision of boundaries.

Boundaries have been very carefully revised in all those *rakhs* which have been retained. By this means considerable areas have in many cases been restored to the villages from which they were taken. The changes made were as few as it was possible to make them, but it is believed that no real case of hardship has escaped unremedied. And at the same time, some pains were taken to see that such changes as were made were really thorough and effectual measures of relief. In a few instances boundaries which undoubtedly pressed hardly upon the adjoining villages have been left undisturbed. The line was so good physically that it could not be changed, but compensation has been made to the suffering villages by the grant of special rights of pasture, or wood-cutting or both.

Special rights.

All special rights claimed or known to exist in regard to any *rakh* have been carefully investigated. Some new ones have been created. Whenever rights have been admitted, care has been taken to define them with all possible accuracy. The most common type of these rights is the power to graze cattle, either without payment, or on payment of fees smaller than those which are paid by others. In some cases the right extends only to a certain number of cattle, and in others to all the cattle of a village in general. With some exceptions, such rights have been recorded on one plan. The right is declared to extend to all such portions of the *rakh* concerned as may from time to time be open for grazing. If at any time the *rakhs* shall be closed against grazing, the exercise of the right will continue over an area not less than a certain fixed minimum. This area is selected by the Forest Officer. Persons dissatisfied with his selection may appeal to the Deputy Commissioner whose orders are final.

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The object aimed at in giving this form to these special rights is to prevent any area from being absolutely shut off from the benefits of a temporary closure.

Interior *Zamíndari* cultivation.

Several of these forest demarcations enclose entire hamlets or even villages which have been left undisturbed. But besides these there are a great number of detached plots of village cultivation within the *rakh* boundaries. Such of these as appeared to be harmless have been allowed to remain, but others, which were plainly hurtful to forest interests, have been expropriated. In a district like Jhelam, where fields taken can hardly be replaced, expropriation, even on a small scale, is a harsh and unpopular measure. The Settlement Officer never resorted to it without reluctance or except in cases of real necessity; and so far as was possible always gave other land in exchange to the expropriated proprietors rather than a money price. In many of these cases the original title of the claimants was doubtful, but long possession entitled him to consideration.

Special grazing arrangements in some *rakhs*.

In a few *rakhs* of the Chakwál and Talagang *tahsíls* special arrangements have been made for the management of the grazing. These are all of one type, and are intended to secure the grazing of the *rakh* to the village from which the *rakh* was formed. The grazing contract for each year is offered to the *lambardárs* of the village at a fixed price. If they refuse it, it is put up to auction. If they accept it, an agreement is taken from them in which they declare themselves to be merely agents for the village community, and engage to levy the amount of the contract money and no more by a *báchh* upon houses. Under the orders of Government these arrangements can only be made for one year at a time; but power is reserved to the Deputy Commissioner to continue them unchanged, from year to year, for four or five years.

Present acreage of forest and waste lands.

The exact area of the Government forests now existing in the Jhelam district is 299,750 acres. Of this 193,179 acres are reserved forests under the Forest Department, and 72,084 acres are waste lands managed by the Deputy Commissioner. The remainder is 34,487 acres, distributed into four *rakhs*, of which the status has not yet been decided, although the Settlement of them has been completed in every other respect. These four *rakhs* are those which are commonly known as the Salt *rakhs*,—Makhiála, Kusak, Dandot, and Dalwál. They contain the Mayo Mines, and most of the other salt sources of the district. A large mining population distributed into several villages is scattered about in them, and these salt-miners, by grant from Government, have many important forest and farming privileges.

Privileges of the Salt-Miners.

Future management of the *rakhs*.

In regard to the future management of the *rakhs* no precise rules have been formulated. But in the 21st paragraph of his memorandum upon the *rakhs* of the Jhelam tahsíl, the Officiating Financial Commissioner laid down the principle that the administration of the *rakhs* must be carried on with regard to general rather that departmental interests:—

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Future management of the *rakhs*.

"I cannot leave this part of the subject without remarking that, although it be decided to make over these hill ranges to the Forest Department as reserved forests, that department must not suppose that this decision will allow of these tracts being *altogether closed against grazing, taking of fuel, &c.* It must be remembered that these *rakhs* are so bound up with the pastoral economy of the district that they cannot be administered from a purely forest point of view; that *portions only of them* must be closed for reproduction, and the remainder held available, on payment, for supplying the pastoral and other necessities of the adjoining villages; that a liberal interpretation must be given to the orders of 1865, and, to use the Conservator of Forest's own words, the line of policy should be to give larger effect to the orders of Government by securing a more uninterrupted user of the *rakhs*, as *rakhs*, to the people." In commenting upon this paragraph the Secretary to Government wrote that "the Lieutenant-Governor fully endorses the remarks made by Colonel Davies in paragraph 21 of his Memorandum as to the closing of these *rakhs* by forest officers; and the departmental management of these areas must, His Honor considers, be always conducted with regard to the considerations urged by the Officiating Financial Commissioner."

Final results.

The final result of the operations was as follows:—In all 161 *ghumáos* of land owned by individuals were acquired by Government, for which Rs. 1,365 were paid as compensation, and 108 *ghumáos* of other land given in exchange. On account of forest lands an addition of Rs. 1,207 and a deduction of Rs. 1,172 were made in the Government rent-roll. On the whole, old *rakhs* aggregating 30·9 square miles were abolished and the lands restored to the villages, of which 10,139 acres were in Jhelam, 1,644 in Chakwál and 6,434 in Talagang. Full details of all these changes are given in Appendices VIII to X of Mr. Thomson's Settlement Report. The forests of the district have already been described in Chapter IV (pages 109—113). Very full information will be found in tables appended to Mr. Thomson's Settlement Report.

CHAPTER VI.

TOWNS, MUNICIPALITIES, AND CANTONMENTS.

Chapter VI.

Towns, Munici lities, and Cant ments.

General statistics towns.

At the Census of 1881, all places possessing more than 5,000 inhabitants, all municipalities, and all head-quarters of districts and military posts were classed as towns. Under this rule the following places were returned as the towns of the district :—

Tahsil.	Town.	Persons.	Males.	Females
Jhelam	Jhelam	21 107	14,963	6,144
Pind Dádan Khán ...	Pind Dádan Khán ...	16,724	8,995	7,729
Chakwál ...	Chakwál	5,717	2.994	2,823
Talagang ...	Bhaun	5,080	2,522	2.558
	Láwa	6,245	3.289	2,956
	Talagang	6,236	3,238	2,998

The distribution by religion of the population of these towns, and the number of houses in each, are shown in Table No. XLIII, while further particulars will be found in the Census Report in Table No. XIX, and its appendix, and in Table XX. The remainder of this chapter consists of a detailed description of each town, with a brief notice of its history, the increase and decrease of its population, its commerce, manufactures, municipal government, institutions, and public buildings; and statistics of births and deaths, trade and manufactures, wherever figures are available.

Jhelam town description.

The town of Jhelam lies in north latitude 32° 56′, east longitude 73° 47′, containing a population of 21,107 souls. It is situated on the right or high bank of the river of that name, the main stream running very close to the town and thus affording great facilities for drainage. There are no groves or gardens round the town, but the scene from the bank on the other side of the river is picturesque; first the broad expanse of the rippling stream fringed with trees, from among which the church spire rises, a conspicuous object; beyond, verdan tundulating land rising in the background to the Pabbi hills, a solitary range thrown across the plain, at right angles to the higher northern mountains.

The civil lines and public offices lie about a mile to the north-east of the town; and about the same distance to the south-west the cantonments are situated, in lands almost entirely destitute of vegetation, the ground being hard and stony, rendering the growth of the trees planted on the road sides slow in the extreme.

The town is traversed by two main streets running east to west and north to south, the one passing through the other and forming the principal *chauk*, which is not known by any particular name. The town being small and of somewhat modern origin, there are no buildings of note; some of the houses, with river frontage, are fairly constructed, but the town is principally composed of low built mud houses; the streets are well paved and are in most cases broad;

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Towns, Municipalities, and Cantonments.

Jhelam town: description.

the drainage and sanitary arrangements are satisfactory, being greatly facilitated by the ample water-supply. There is no public water-supply on a large scale, but the wells afford excellent drinking water at a depth of from 18 to 20 feet, and the river water is also good.

The Jhelam cantonments, as above noted, lie about a mile to the south-west of the town. The surrounding country is a dismally barren plain, and the cantonments themselves are mostly destitute of vegetation. The bare fields give an air of desolation to the place which even the stir of military life fails to remove.

History:

The present town is of modern origin; legend locates it on the site of one of Alexander's cities built in commemoration of his passage of the Jhelam and his victory over Porus. But the more popular tradition fixes the crossing at Jalálpur several miles down the river. The old town of Jhelam was at the left bank of the river and parts of it still exist. About the year 1532 A.D. some boatmen from old Jhelam established themselves on the right bank for the better management of the ferry, and thus founded the modern town. The new settlement gradually grew in size and was found at the time of annexation to contain some 500 houses.

It was then chosen as the site of a cantonment, and this circumstance had a great influence in attracting trades-people—Parsís and others—to the place. This fact, and its position as head-quarters of the civil authorities of the district, have given the town an importance which it would otherwise have wanted. For some years it was the seat of the Commissioner of the Division. In 1850, however, the head-quarters of the Division were transferred to Ráwalpindi.

Jhelam is said to be identical with the ancient Puta, and to have given a name to Putwár. This is more than doubtful. It is certain, however, that an old town once occupied the hillock which is now covered by the bungalows of the railway officials. Coins and pottery of various epochs are still found there. In the Sikh time there was a fort at Jhelam to protect the passage of the river, but the place was quite unimportant, and was mainly occupied by a settlement of Malláhs. The fort has been absorbed into the present town, but is still called Indar Kot. Since the commencement of British rule Jhelam has thriven mightily. Owing to her position she has always been an *entrepot* for most of the trade of the district. But she has owed the greater part of her prosperity to the salt traffic.

Taxation, trade, &c.

The town of Jhelam was constituted in 1867 a second class municipality. The Committee has the Deputy Commissioner as President; the Civil Surgeon, District Superintendent of Police, the *Tahsíldár*, and Head-master of the District School, as *ex-officio* members, and 12 non-official members selected by the Deputy Commissioner and appointed by Government. Table No. XLV shows the income of the municipality for the last few years. It is chiefly derived from octroi duties levied at various rates on sundry descriptions of goods brought within the limits of the municipality.

Jhelam has always been the trade centre for most of the district; and especially for the salt of the Salt Range, which is, or was

Jhelam town : Taxation, trade, &c.

boated up the river from Pind Dádan Khán to Jhelam, and thence distributed all over the country. The fact that the town formed the terminus of the Panjáb Northern State Railway for some years gave it an extraordinary impetus. But the completion of the line has in great part diverted the traffic in salt, which now goes straight to Lahore. Jhelam, however, will probably always maintain some position as a place of commerce, and a depot for the general trade of the district. A detailed notice of some of the industries of the town will be found in Mr. Kipling's note given at pages 117, 118.

Institutions and public buildings.

The principal institutions of the town of Jhelam are :—The Charitable Dispensary, which occupies a central position in the town, in all respects convenient for the community ; the District School which is in close proximity to the town ; the Municipal Hall, with a flower garden attached ; this building is well constructed and has two wings of *pakka* quarters for the accommodation of members attending the District Committee, which also holds its sittings in the Hall ; the Deputy Commissioner's Court-house which is surrounded by the Police Office, the Jail, the Treasury and the Treasury Office buildings.

There are two *sarais* adjacent to the town—one is on the banks of the river, known as Mangal Sain's *sarai*, and the other Devi Dás, only recently built which is more frequented by travellers than the older building, as it is nearer the Railway Station. The Church, in the cantonments, has a very high and graceful steeple, which can be seen at a distance of several miles from the Railway line and other roads. The cantonment possesses a few good bungalows, but most of the buildings are insignificant, and the cantonment garden is neglected owing to paucity of funds. There is a fine public garden in the Civil Lines adjoining the *kacheri* lands. This garden is kept in perfect order ; and has a band-stand, deer-paddock and lawn-tennis courts.

Population and vital statistics.

Limits of enumeration	Year of Census	Persons.	Males.	Females.
Whole town ...	1868	7,393	4,514	2,879
	1881	21,107	14,963	6,144
Municipal limits ...	1868	5,148		
	1875	7,947		
	1877	11,319		
	1881	16,634		

The population, as ascertained at the enumerations of 1868, 1875, 1877 and 1881, is shown in the margin.

It is difficult to ascertain the precise limits within which the enumerations of 1868, 1875 and 1877 were taken; but the details in the margin, which give the population of suburbs, throw some light on the matter.

Town or Suburb.	Population. 1868.	Population. 1881.
Jhelam Town ...	5,148	13,496
Pira Ghaib ...	577	687
Dánpur; Rámpur ...	307	315
Railway Quarters ...	...	1,427
Civil Lines	621	709
Cantonments .	740	4,473

The figures for the population within municipal limits according to the Census of 1868 are taken from the published tables of the Census of 1875; but it was noted at the time that their accuracy was in many cases doubtful. It would appear

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Towns, Municipalities, and Cantonments.

Jhelam town : Population and vital statistics.

from information supplied by the Deputy Commissioner that the municipal boundaries were somewhat extended between 1868 and 1875.

The construction of the Panjáb Northern State Railway, of which Jhelam for some time formed the terminus, attracted such a large population to the terminus, that a special Census was taken on 10th January 1877, the figures of 1875 being no longer applicable. The population was then found to consist of 7,399 males and 3,920 females. The location of a large transport camp at Jhelam during the Kábul campaign again increased the population, which was at its highest at the Census of 1881. The railway now runs on to Pesháwar, the transport camp has been broken up, and the population is again steadily decreasing.

The constitution of the population by religion, and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX of the Census Report of 1881. The annual birth and death rates per mille of population since 1868 are given below, the basis of calculation being in every case the figures of the most recent Census.

Year.	Birth Rates			Death Rates		
	Persons	Males.	Females	Persons.	Males.	Females.
1868 ...	...	...	...	...	...	...
1869 ...	...	...	...	66	64	69
1870 ...	36	32	41	67	70	61
1871 ...	38	37	39	38	40	35
1872 ...	36	20	16	49	48	51
1873 ...	23	11	11	47	50	42
1874 ...	22	12	10	21	22	21
1875 ...	22	14	10	23	26	20
1876 ..	14	8	6	19	20	16
1877 ...	16	9	7	16	...	...
1878 ...	16	8	8	64	63	65
1879 ...	11	6	5	79	87	63
1880 ...	12	7	5	26	31	18
1881 ...	17	11	6	21	20	22
Average	21	10	8	41	45	40

The actual number of births and deaths registered during the last five years is shown in Table No. XLIV.

Pind Dádan Khán Town.

The town of Pind Dádan Khán lies in north latitude 32° 35', east longitude 73° 5' and contains a population of 16,724 souls. It is situated about a mile from the river, and about five miles from the foot of the Salt Range. It consists of three distinct portions—Pind Dádan Khán proper in the centre, Kot Sáhib Khán to the north-east, and Kot Sultán to the south. To the south of the town facing the river there are some gardens which, though not of much luxuriance, afford a pleasant contrast to the otherwise bleak aspect of the environs in which saline efflorescence largely predominates. The town has long been an important place, and is much better built than any other in the district, though it does not possess many wide streets, and those of Kot Sáhib Khán are distinctly narrow. The drainage of the town is attended with considerable difficulty owing to its disadvantageous low position on the skirt of a marsh;

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Towns, Municipalities, and Cantonments.

Pind Dádan Khán Town.

late efforts at sanitary improvement have been attended with some success, and there are hopes of further improvements. The municipality has two large tanks, one at Kot Sáhib Khán, and the other lying between Kot Sultán and Pind Dádan Khán proper. The supply of drinking water is, however, deficient, that of the wells being brackish both in the town and neighbourhood: a fresh-water canal cut from the Jhelam supplies the want for a portion of the year, but on the whole the scarcity of water, and the heat and glare of the white crusted soil, make residence at Pind Dádan Khán distasteful alike to both European and Natives.

Pind Dádan Khán was founded in 1623 by Dadán Khán, the head of the family of Khokhar Rájpúts who reside in the place; Sultán Kot and Kot Sáhib Khán were built subsequently by the Rájás of the same tribe. The extension of the Panjáb Northern State Railway to the town, has added much to its importance, but the town has always been of considerable repute from its connection with the famous salt mines in its vicinity.

The municipality of Pind Dádan Khán was first constituted in 1867. It is a second class municipality. The sub-divisional officer acting as Vice President and the Assistant Surgeon in charge of dispensary and the Assistant Superintendent of Police being *ex-officio* members. Table No. XLV shows the income of the municipality for the last few years. It is chiefly derived from octroi levied at various rates on goods brought within municipal limits.

Pind Dádan Khán was till quite lately the trade emporium for the whole neighbourhood, and carried on, besides its local traffic, an extensive export and import trade with the distant marts of the Province. Its traders had their agents at Amritsar, Sakkar, Multán, Peshawár, and in the countries beyond the border. Lying low, near the bank of the river, its situation was admirably adapted to secure the traffic in salt from the mines at Khewra, and most of the export trade of the district which goes down the river to Multán and Kurrachee. The latter item, however, is very uncertain in amount. And since the opening of the new Salt Railway to Miání the trade in salt is seriously threatened. It is impossible to foresee the exact result. In certain contingencies Pind Dádan Khán might recover its hold on the trade; but at present it seems probable that the trade will gravitate to Lála Músa, or eventually to Khewrá itself or to Miání. Meanwhile carriage of salt by boat between Pind Dádan Khán and Jhelam has almost ceased. But there is, and probably will continue to be, a large general trade in Pind Dádan Khán for the supply of the Potwár and Talagang. The braziers of the town are an important body, and the pots and pans and other utensils turned out by them are in request in many parts of the Panjáb. There is also a considerable weaving industry, and embroidered *lungís* are often sold at high prices. Its principal exports are salt towards the south, silk and cotton piece-goods northwards and westwards, and brass and copper wares to the whole neighbourhood. An extensive trade is carried on also in country produce, grain, *ghí* and oil. It imports English piece-goods, cast iron, zinc and raw silk from Amritsar and Multán; woollen fabrics from Kashmír; dried fruits, furs and woollen

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Pind Dádan Khán Town.

stuffs of Central Asia from Pesháwar. Among other industries, that of boat-building is largely carried on, and river boats of Pind Dádan Khán make, are in request throughout the whole course of the Jhelam. A more detailed notice of some of the industries of the town will be found in Mr. Kipling's note given at pages 117, 118.

The principal buildings in the town are the dispensary, the mission house, and the *tahsíl*, which last is rather a fine old *nazúl* building, but now in an insecure condition; a new *tahsíl* building which will be in a more central position is shortly to be erected.

The population as ascertained at the enumerations of 1868, 1875, and 1881 is shown below:—

Limits of enumeration.	Year of Census.	Persons.	Males.	Females.
Whole town ...	1868	17,819	9,487	8,332
	1881	16,724	8,995	7,729
Municipal limits ...	1868	17,819	......	......
	1875	15,397	......	......
	1881	16,724	......	......

It is difficult to ascertain the precise limits within which the enumerations of 1868 and 1875 were taken; but the details in the margin, which give the population of suburbs, throw some light on the matter. The figures for the population within municipal limits according to the Census of 1868 are taken from the published tables of the Census of 1875; but it was noted at the time that their accuracy was in many cases doubtful. The constitution of the population by religion, and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX. of the Census Report of 1881. The annual birth and death rates per mille of population since 1868 are given at the top of the next page, the basis of calculation being in every case the figures of the most recent Census. The actual number of births and deaths registered during the last five years is shown in Table No. XLIV.

Town or Suburb.	Population.	
	1868.	1881.
Pind Dádan Khán Town ...	8,924	8,870
Kot Sáhib Khán ...	4,528	4,112
Do. Sultán ...	1,953	1,525
Mandi ...	693	741
Jhugián with Nawálog ...	635	565
Kuliwál; Kotla Khilchi ...	1,086	911

Chakwál Town.

Chakwál is the head-quarters of a fiscal sub-division (*tahsíl*), situated nearly equidistant from Pind Dádan Khán and Talagang and 54 miles west of Jhelam; latitude 32° 56′; longitude 72° 54′; population according to the Census of 1881, 5,717. The buildings in the town are unpretentious. It has a *bázár* from south to north and from east to west a grain market. The town also possesses a police station, school, a dispensary, a circuit house, distillery and Municipal Committee house. The main road from Pind Dádan Khán to Káwalpindi passes through Chakwál. There is an encamping-ground adjoining the district bungalow.

The Municipal Committee consists of ten members appointed by the Deputy Commissioner. Its income for the last few years is

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Pind Dádan Khán Town.

Year.	Birth Rates.			Death Rates.		
	Persons	Males	Females.	Persons.	Males.	Females.
1868 ...	...	...	...	28	28	29
1869 ...	...	...	...	67	58	77
1870 ...	19	32	19	43	44	42
1871 ...	35	37	36	30	29	32
1872 ...	31	20	14	69	62	78
1873 ...	20	11	10	35	33	37
1874 ...	26	12	13	27	25	30
1875 ..	33	14	15	32	32	32
1876 ...	43	8	20	33	31	35
1877 ...	44	9	22	30	28	34
1878 ...	40	8	20	63	56	71
1879 ...	29	6	13	40	42	37
1880 ...	36	7	17	29	29	29
1881 ...	44	11	21	28	27	30
Average	35	10	17	40	38	43

Chakwál Town.

shown in Table No. XLV, and is derived from octroi levied on goods brought within the municipal limits for local consumption. Chakwál has from time immemorial been the seat of administration in the Dhanni country. It is said to have been founded by a Mair Rájpút from Jammu, whose descendants are at the present day proprietors of the land in the neighbourhood. It is still the head-quarters of the tribe. It is well situated on high firm ground, and drained by several ravines of a description which forms the distinguishing feature of the neighbourhood. The town has a moderate trade in grain, more notably in gram, the staple product of the neighbourhood; and is celebrated for its manufacture of superior shoes and sandals ornamented with tinsel, which are much prized by Panjáb women, and are exported to distant marts.

The population as ascertained at the enumerations of 1868, 1875, and 1881 is shown below:—

Limits of enumeration.	Year of Census.	Persons.	Males,	Females
Whole town ...	1868	5.767	2,915	2,852
	1881	5,717	2,894	2,823
Municipal limits ...	1868	5,767	...	...
	1875	5,674	...	...
	1881	5,717	...	...

The constitution of the population by religion and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX of the Census Report of 1881.

Bhaon Town.

Bhaon is situated in the Chakwál *tahsíl* and lies only 16 miles from the *tahsíl* head-quarters. Its population is 5,080 souls; it possesses a considerable number of *pakka* built houses, and two masonry tanks and likewise a couple of small masonry wells. It is also provided with a school-building. It is the old capital of the Dhanni country, and many families from among its inhabitants obtain service under Government from generation to generation.

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Bhaon Town.

Year of Census.	Persons.	Males.	Females.
1868	4,806	2.429	2.377
1881	5,080	2,522	2,558

The population as ascertained at the enumerations of 1868 and 1881 is shown in the margin.

The constitution of the population by religion, and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX of the Census Report of 1881.

Láwa Town.

Láwa is situated in the Talagang *tahsíl*, near the western border of the district, and a few miles only to the north of the Salt Range and Mount Sakesar, in latitude 32° 41'; longitude 72° 69'. Its population according to the Census of 1881 is 6,245. Láwa is a large Awán village, and its inhabitants are almost exclusively agriculturists. There are four or five *chaudrís*, and party faction is ripe. The population is mainly concentrated in the central village, though the *dhoks* or outlying hamlets, which are included in the Census of the town, are very numerous, and scattered over the area of 135 square miles which forms the village domain. There is a police station at Láwa, subordinate to the Assistant District Superintendent at Pind Dádan Khán.

Year of Census.	Persons.	Males.	Females.
1868	5,259	2,755	2,504
1881	6,245	3,289	2,956

The population as ascertained at the enumerations of 1868 and 1881 is shown in the margin.

The details in the margin, give the population of suburbs. The constitution the population by religion, and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX of the Census Report of 1881.

Town or Suburb.	Population.	
	1868	1881
Láwa town ...	4,071	4,341
Suburbs ...	1,188	1,904

Talagang Town.

Talagang is the head-quarters of a fiscal sub-division (*tahsíl*) situated in the western portion of the district 80 miles north-west of Jhelam, latitude, 72° 28',; longitude 32° 56'. Population numbers 6,236 souls. The town is an unpretentious collection of native houses without a wall or any building of importance. It has a single *bázár*, a grain-market, a *thána*, school-house, dispensary and a circuit-house; the latter is a well built and lofty building, with ample accommodation. There is a tank with a garden about half a mile south of the town supported from local funds. This tank is of large dimensions, and contains an unfailing supply of water, to the great comfort of the town inhabitants and neighbourhood, as wells are not numerous in this locality, water being at an immense depth from the surface of the ground. The water, however, of the wells that have been constructed at considerable cost is of excellent quality. There was a Cantonment at Talagang for some years; but in 1882 it was finally abolished.

The municipal committee consists of ten members appointed by the Deputy Commissioner. The income for the last few years is shown in Table No. LXV, and is derived from octroi duty, levied on goods brought within the municipal limits at various rates. The municipal

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Talagang town.

income is insignificant, as the town is essentially rural. The town was founded by a chief of the Awán tribe some 260 years ago, and since its foundation, has been the seat of administration of the neighbourhood, at first under the Awáns, then under the Sikhs, and now under British rule. It possesses some commercial importance as a local centre of trade; the town is healthily situated in a dry plateau, well drained by ravines.

The population as ascertained at the enumerations of 1868, 1875 and 1881 is shown below:—

Limits of Enumeration	Year of Census.	Persons.	Males	Females
Whole town ...	1868	7,192	4,412	2,780
	1881	6,236	3,238	2,998
Municipal limits ...	1868	5,647	......	......
	1875	5,659	......	......
	1881	5,915	......	......

It is difficult to ascertain the precise limits within which the enumerations of 1868 and 1875 were taken; but the details in the margin, which give the population of suburbs, throw some light on the matter. The figures for the population within municipal limits according to the Census of 1868 are taken from the published tables of the Census of 1875; but it was noted at the time that their accuracy was in many cases doubtful. The constitution of the population by religion, and the number of occupied houses are shown in Table No. XLIII. Details of sex will be found in Table No. XX. of the Census Report of 1881.

Town or Suburb.	Population.	
	1868	1881
Talagang east ...	4,533	2,848
Do. west ...	2,659	3,067
Cantonments ...	not known.	321

STATISTICAL TABLES

APPENDED TO THE

GAZETTEER

OF THE

JHELAM DISTRICT.

(INDEX ON REVERSE).

"ARYA PRESS," LAHORE.

STATISTICAL TABLES.

Table No. II, showing DEVELOPMENT.

1	2	3	4	5	6	7
DETAILS.	1853-54.	1858-59.	1863-64.	1868-69.	1873-74.	1878-79.
Population ..	..	..	..	500,988	..	589,373
Cultivated acres ..	..	..	..	763,845	893,200	853,447
Irrigated acres ..	..	..	..	71,460	71,580	24,937
Ditto (from Government works) ..	..	..	..	..	..	..
Assessed Land Revenue, rupees ..	..	..	..	6,15,050	6,14,183	6,07,748
Revenue from land, rupees ..	..	..	..	5,6[illegible],126	5,98,347	5,77,615
Gross revenue, rupees ..	..	..	..	6,29,804	7,06,646	7,48,059
Number of kine ..	..	..	..	222,671	228,195	229,653
" sheep and goats ..	..	..	..	73,408	82,915	275,845
" camels ..	..	..	..	6,979	7,195	9,399
Miles of metalled roads ..	..	..	..	972 (metalled and unmetalled)	3	28
" unmetalled roads ..	..	..	..		978	882
" Railways ..	..	..	..	..	..	..
Police staff ..	..	..	431	540	523	534
Prisoners convicted ..	769	1,126	1,026	2,185	2,708	2,762
Civil suits,—number ..	1,723	1,295	1,593	2,615	4,378	4,770
" —value in rupees ..	1,64,571	1,02,459	84,522	1,74,037	2,97,863	2,67,883
Municipalities,—number ..	..	..	..	..	5	4
" —income in rupees ..	..	..	..	34,003	41,628	60,857
Dispensaries,—number of ..	..	..	..	4	4	4
" —patients ..	..	..	..	18,036	20,128	41,466
Schools,—number of ..	..	..	64	108	64	55
" —scholars ..	..	..	2,443	4,382	3,998	3,948

NOTE.—These figures are taken from Tables Nos. I, III, VIII, XI, XV, XXI, XLI, XLV, L, LIX, and LXI, of the Administration Report.

Table No. III, showing RAINFALL.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	ANNUAL RAINFALL IN TENTHS OF AN INCH.																	
Rain-gauge station.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	Average.
Jhelam ..	297	213	185	111	207	162	132	165	174	306	338	236	266	265	152	157	326	217
Chakwal ..	106	126	185	75	68	128	104	50	94	113	241	192	289	218	170	134	285	152
Pind Dadan Khan ..	..	..	..	..	..	136	214	175	160	247	220	124	169	168	156	142	318	186
Talagang ..	..	..	..	..	..	126	202	208	170	142	241	252	151	155	205	140	317	192

NOTE.—These figures are taken from the weekly rainfall statements published in the *Panjab Gazette*.

Table No. IIIA, showing RAINFALL at head-quarters.

1	2	3	1	2	3
	ANNUAL AVERAGES.			ANNUAL AVERAGES.	
MONTHS.	No. of rainy days in each month—1867 to 1876.	Rainfall in tenths of an inch in each month—1867 to 1881.	MONTHS.	No. of rainy days in each month—1867 to 1876.	Rainfall in tenths of an inch in each month—1867 to 1881.
January ..	2	12	September ..	3	18
February ..	3	14	October ..	1	5
March ..	4	14	November ..	..	3
April ..	2	9	December ..	1	8
May ..	2	7	1st October to 1st January ..	3	15
June ..	3	17	1st January to 1st April ..	9	39
July ..	8	53	1st April to 1st October ..	25	150
August ..	7	46	Whole year ..	37	205

NOTE.—These figures are taken from Table No. XXIV of the Revenue Report, and from page 34 of the Famine Report.

Table No. IIIB, showing RAINFALL at Tahsil Stations.

1	2	3	4	5
	AVERAGE FALL IN TENTHS OF AN INCH, FROM 1873-74 TO 1877-78.			
TAHSIL STATIONS.	1st October to 1st January.	1st January to 1st April.	1st April to 1st October.	Whole year.
Jhelam ..	..	..	..	..
Pind Dadan Khan ..	15	25	102	142
Chakwal ..	6	26	62	94
Talagang ..	9	31	109	149

NOTE.—These figures are taken from pages 36, 37 of the Famine Report.

Table No. V, showing the DISTRIBUTION of POPULATION.

1		2	3	4	5	6
		District.	Tahsil. Jhelam.	Tahsil. Pind Dadan Khan.	Tahsil. Chakwal.	Tahsil. Talagang.
Total square miles ..		4,039	880	887	1,016	1,247
Cultivated square miles ..		1,475	277	266	470	462
Culturable square miles ..		458	69	132	146	111
Square miles under crops (average 1877 to 1881)		1,267	319	290	337	321
Total population ..		589,373	174,169	160,186	154,144	94,874
Urban population ..		61,109	21,107	16,724	10,797	12,481
Rural population ..		528,264	153,062	140,462	143,347	82,393
Total population per square mile ..		151	197	166	188	79
Rural population per square mile ..		135	173	148	175	69
Towns & villages.	Over 10,000 souls ..	2	1	1	..	..
	5,000 to 10,000 ..	4	..	..	2	2
	3,000 to 5,000 ..	8	2	3	..	3
	2,000 to 3,000 ..	30	4	8	10	8
	1,000 to 2,000 ..	115	21	41	31	22
	500 to 1,000 ..	189	56	52	57	24
	Under 500 ..	608	338	106	140	24
	Total ..	956	422	211	240	83
Occupied houses ..	Towns ..	8,025	2,318	2,780	1,381	1,546
	Villages ..	63,988	18,055	23,874	11,860	10,199
Unoccupied houses ..	Towns ..	2,451	572	849	560	470
	Villages ..	6,828	1,878	2,082	1,684	1,184
Resident families ..	Towns ..	15,130	4,564	4,690	2,882	2,994
	Villages ..	116,623	33,783	34,138	30,650	18,052

NOTE.—These figures are taken from Tables Nos. I and XVIII of the Census of 1881, except the cultivated, culturable and crop areas, which are taken from Tables Nos. I and XLIV of the Administration Report.

Table No. VI, showing MIGRATION.

1	2	3	4	5	6	7	8	9
			Males per 1,000 of both sexes.		Distribution of Immigrants by Tahsils.			
Districts.	Immigrants.	Emigrants.	Immigrants.	Emigrants.	Jhelam.	Pind Dadan Khan.	Chakwal.	Talagang.
Amritsar ..	1,012	699	806	486	864	81	33	34
Sialkot ..	3,007	428	703	666	2,485	259	186	77
Lahore ..	1,030	758	750	730	858	101	29	42
Gujranwala ..	1,768	506	705	569	1,373	289	65	41
Rawalpindi ..	8,951	11,353	604	630	2,676	1,006	2,709	2,560
Gujrat ..	7,280	3,889	566	390	5,205	1,883	145	47
Shahpur ..	8,118	5,184	525	450	1,082	4,890	273	1,873
Bannu ..	1,186	1,616	536	641	60	81	17	1,028
Peshawar ..	499	1,947	770	872	359	52	31	57
N. W. P. and Oudh ..	2,425	..	744	..	2,112	161	62	86
Kashmir ..	6,254	..	601	..	5,193	546	410	105

NOTE.—These figures are taken from Table No. XI of the Census Report of 1881.

Table No. VII, showing RELIGION and SEX.

1	2	3	4	5	6	7	8	9
	District.			Tahsils.				Villages.
	Persons.	Males.	Females.	Jhelam.	Pind Dadan Khan.	Chakwal.	Talagang.	
Persons ..	589,373	..	..	174,169	166,186	154,144	94,874	528,264
Males ..	..	313,448	..	96,479	87,047	80,206	49,716	277,547
Females ..	..	..	275,925	77,690	79,139	73,938	45,158	250,717
Hindus ..	60,949	33,609	27,340	17,465	21,713	14,487	7,284	41,421
Sikhs ..	11,188	6,567	4,621	3,424	1,091	5,122	1,551	7,933
Jains ..	58	28	30	..	58	..	..	..
Buddhists ..	..	..	..	..	..	..	..	..
Zoroastrians ..	16	9	7	16	..	..	..	..
Musalmans ..	516,745	272,977	243,768	152,916	143,273	134,534	86,022	478,801
Christians ..	416	257	159	347	51	1	17	109
Others and unspecified ..	1	1	..	1	..	..	..	..
European & Eurasian Christians	368	226	142	301	49	1	17	..
Sunnis ..	511,286	270,231	241,055	152,339	140,314	133,056	85,577	473,872
Shiahs ..	5,427	2,726	2,701	546	2,958	1,478	445	4,929
Wahabis ..	6	3	3	5	1	..	..	..

NOTE.—These figures are taken from Tables Nos. III, IIIA, IIIB of the Census of 1881.

Table No. VIII, showing LANGUAGES.

1	2	3	4	5	6
		Distribution by Tahsils.			
Language.	District.	Jhelam.	Pind Dadan Khan.	Chakwal.	Talagang.
Hindustani ..	3,219	2,847	219	74	79
Bagri ..	1	..	1	..	..
Panjabi ..	584,073	169,965	165,698	153,892	94,518
Pashtu ..	1,171	609	183	135	244
Kashmiri ..	354	290	9	42	13
Sindhi ..	3	..	3	..	..
Persian ..	30	30	..	..	..
English ..	347	284	50	..	13

NOTE.—These figures are taken from Table No. IX of the Census Report for 1881.

Table No. IX, showing MAJOR CASTES and TRIBES.

1	2	3	4	5	6	7	8	9	10
Serial No. in Census Table No. VIIIA.	Caste or tribe.	Total Numbers.			Males, by religion.				Proportion per mille of population.
		Persons.	Males.	Females.	Hindu.	Sikh.	Jain.	Musalman	
	Total population ..	589,373	313,448	275,925	33,609	6,567	28	272,977	1,000
18	Biloch ..	2,840	1,436	1 404	..	..	..	1,436	5
6	Pathan ..	4,618	2,887	1,731	..	..	..	2,885	8
1	Jat ..	88,371	47,964	40,407	341	617	..	47,006	150
2	Rajput ..	53,279	28,439	24,840	504	33	..	27,897	90
103	Kahut ..	8,766	4,497	4,269	4	..	..	4,493	8
68	Gakkhar ..	9,920	4,977	4,943	..	..	..	4,977	17
12	Awan ..	92,856	48,496	44,360	..	..	..	48,496	158
8	Gujar ..	18,924	10,330	8,594	35	3	..	10,285	32
7	Arain ..	15,470	8,067	7,403	..	..	..	8,067	35
17	Shekh ..	8,412	4,509	3,903	..	..	..	4,508	14
37	Mughal ..	11,222	5,770	5,452	..	..	..	5,770	19
3	Brahman ..	10,010	5,492	4,518	5,280	211	..	..	17
24	Saiyad ..	14,663	7,476	7,187	..	..	..	7,476	25
21	Nai ..	10,569	5,549	5,020	57	12	..	5,480	18
25	Mirasi ..	7,643	3,861	3,782	1	..	..	3,860	13
16	Khatri ..	35,941	18,917	17,024	15,180	3,731	5	1	61
10	Arora ..	12,345	6,870	5,475	5,631	1,232	..	7	21
44	Khojah ..	2,672	1,355	1,317	..	..	..	1,355	5
47	Maniar ..	11,414	6,047	5,367	3	..	..	6,044	19
26	Kashmiri ..	9,672	5,264	4,408	1	..	..	5,263	16
4	Chuhra ..	25,027	13,277	11,750	596	132	..	12,548	42
19	Mochi ..	21,844	11,376	10,468	..	..	..	11,376	37
9	Julaha ..	28,620	15,144	13,476	33	3	..	15,108	49
15	Jhinwar ..	3,413	1,924	1,489	489	21	..	1,414	6
28	Machhi ..	6,129	3,331	2,798	..	..	..	3,331	6
22	Lohar ..	9,970	5,431	4,539	15	23	..	5,393	17
11	Tarkhan ..	14,824	8,043	6,781	114	168	..	7,766	25
13	Kumhar ..	10,031	5,315	4,716	79	8	..	5,228	17
32	Dhobi ..	6,686	3,501	3,185	227	6	..	3,268	11
23	Teli ..	8,302	4,285	4,017	5	..	..	4,280	14
30	Sunar ..	5,806	2,978	2,828	2,526	148	..	304	10

Note.—These figures are taken from Table No. VIIIA of the Census of 1881.

Table No. IXA, showing MINOR CASTES and TRIBES.

1	2	3	4	5
Serial No. in Census Table No. VIIIA.	Caste or tribe.	Persons.	Males.	Females
35	Faqir Miscls. and unspecified ..	683	400	283
33	Qassab	2,003	1,034	969
40	Jogi	1,290	583	707
42	Mallah	2,145	1,175	970
56	Kalal	1,076	556	520
58	Khokhar	1,745	964	781
61	Darzi	2,222	1,154	1,068
67	Lilari	1,156	608	548
69	Bhatiya	1,100	625	475

Note—These figures are taken from Table No. VIIIA of the Census of 1881.

Table No. X, showing CIVIL CONDITION.

1	2	3	4	5	6	7	8
DETAILS.		SINGLE.		MARRIED.		WIDOWED.	
		Males.	Females.	Males.	Females.	Males.	Females.
Actual figures for religions.	All religions	173,485	114,134	125,022	126,167	14,941	35,624
	Hindus	17,344	8,543	14,361	13,298	1,904	5,499
	Sikhs	3,249	1,431	2,930	2,435	389	755
	Jains	15	7	12	15	1	8
	Buddhists	...	...	...	...	...	...
	Musalmans	152,730	104,077	107,005	110,343	12,642	29,351
	Christians	142	72	110	76	5	11
Distribution of every 10,000 souls of each age.	All ages	5,535	4,136	3,988	4,873	477	1,291
	0—10	9,979	9,917	21	82	...	1
	10—15	9,467	7,906	523	2,059	10	34
	15—20	7,692	2,930	2,246	6,912	62	158
	20—25	5,200	636	4,618	8,973	182	391
	25—30	4,098	208	5,711	9,187	191	605
	30—40	2,251	112	7,404	8,667	345	1,221
	40—50	1,379	87	7,854	7,248	767	2,665
	50—60	1,149	72	7,519	5,426	1,332	4,502
	Over 60	358	70	6,839	2,440	2,802	7,481

NOTE.—These figures are taken from Table No. VI of the Census Report.

Table No. XI, showing BIRTHS and DEATHS.

1	2	3	4	5	6	7	8	9	10
YEARS.	TOTAL BIRTHS REGISTERED.			TOTAL DEATHS REGISTERED.			TOTAL DEATHS FROM		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Cholera.	Small-pox.	Fever.
1877	..	..	..	5,396	4,651	10,047	2	38	5,409
1878	..	..	..	7,689	7,132	14,821	..	181	10,384
1879	..	..	..	12,018	9,686	21,704	1,962	2,406	12,858
1880	8,760	7,334	16,094	7,737	6,327	14,064	7	168	9,545
1881	10,497	9,238	19,735	6,309	5,516	11,825	20	11	7,495

NOTE.—These figures are taken from Tables Nos. I, II, VII, VIII and IX of the Sanitary Report.

Table No. XI A, showing MONTHLY DEATHS from ALL CAUSES.

1	2	3	4	5	6	7
MONTH.	1877.	1878.	1879.	1880.	1881.	Total.
January	674	997	1,880	1,254	1,153	5,958
February	561	667	1,580	1,103	957	4,868
March	628	674	1,544	1,015	935	4,796
April	591	856	1,650	826	828	4,751
May	887	1,301	2,405	966	806	6,365
June	1,047	1,022	2,315	1,185	806	6,375
July	835	861	1,468	962	956	5,082
August	812	876	1,595	1,233	817	5,333
September	850	1,430	1,839	1,366	990	6,475
October	928	1,898	2,061	1,496	1,317	7,700
November	1,112	2,415	1,944	1,278	1,035	7,784
December	1,122	1,824	1,423	1,380	1,225	6,974
Total	10,047	14,821	21,704	14,064	11,825	72,461

NOTE.—These figures are taken from Table No. III of the Sanitary Report.

Table No. XI B, showing MONTHLY DEATHS from FEVER.

1	2	3	4	5	6	7
MONTH.	1877.	1878.	1879.	1880.	1881.	Total.
January ..	386	552	1,481	926	776	4,121
February ..	318	407	1,138	763	655	3,281
March ..	337	387	859	649	616	2,848
April ..	294	509	700	500	512	2,515
May ..	427	746	839	613	496	3,121
June ..	536	621	697	777	495	3,126
July ..	478	530	619	588	524	2,739
August ..	420	500	851	762	453	2,986
September ..	409	1,044	1,234	954	605	4,246
October ..	511	1,547	1,701	1,083	826	5,668
November ..	646	2,049	1,625	925	726	5,971
December ..	647	1,492	1,114	1,035	811	5,069
TOTAL ..	5,409	10,384	12,858	9,545	7,495	45,691

NOTE.—These figures are taken from Table No. IX of the Sanitary Report.

Table No. XII, showing INFIRMITIES.

1	2	3	4	5	6	7	8	9
	INSANE.		BLIND.		DEAF AND DUMB.		LEPERS.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
All religions { Total ..	209	122	1,030	1,030	384	229	166	61
All religions { Villages ..	178	109	901	950	353	214	156	56
Hindus ..	24	18	126	127	24	10	5	4
Sikhs ..	1	..	14	12	..	3	2	..
Musalmans ..	184	104	889	891	360	216	159	57

NOTE.—These figures are taken from Tables Nos. XIV to XVII of the Census of 1881.

Table No. XIII, showing EDUCATION.

1	2	3	4	5	1	2	3	4	5
	MALES.		FEMALES.			MALES.		FEMALES.	
	Under instruction.	Can read and write.	Under instruction.	Can read and write.		Under instruction.	Can read and write.	Under instruction.	Can read and write.
All religions { Total ..	4,561	12,535	99	141	Musalmans ..	2,481	3,739	59	47
All religions { Villages ..	3,222	7,709	35	64	Christians ..	21	179	19	68
Hindus ..	1,800	7,378	11	19	Tahsil Jhelam ..	1,515	5,012	31	66
Sikhs ..	257	1,229	10	6	" Pind Dadan Khan	1,468	3,321	13	39
Jains ..	2	7	..	..	" Chakwal ..	903	2 370	34	26
Buddhists ..	..	..	..	..	" Talagang ..	675	1,832	21	10

NOTE.—These figures are taken from Table No. XIII of the Census of 1881.

Table No. XIV, showing detail of SURVEYED and ASSESSED AREA.

1	2	3	4	5	6	7	8	9	10	11	12
	CULTIVATED.				UNCULTIVATED.						
	Irrigated.										
	By Government works.	By private individuals.	Unirrigated.	Total cultivated.	Grazing lands.	Culturable.	Unculturable.	Total uncultivated.	Total area assessed.	Gross assessment.	Unappropriated culturable waste, the property of Government.
1868-69 ..	..	71,460	692,385	763,845	358,747	258,825	1,120,873	1,738,445	2,502,290	615,050	937
1873-74 ..	..	71,580	731,620	893,200	358,755	252,800	1,087,645	1,699,200	2,502,400	614,183	561
1878-79 ..	..	24,937	828,510	853,447	410,116	211,691	1,027,209	1,649,016	2,502,433	607,748	472
Tahsil details for 1878-79—											
Tahsil Jhelam ..	..	8,562	170,586	179,148	102,500	55,230	222,895	380,625	559,773	163,890	180
" P. D. Khan	..	9,299	128,545	137,844	37,000	19,720	353,667	410,387	548,231	182,861	171
" Chakwal ..	..	4,272	295,285	299,557	95,300	15,645	232,283	343,228	642,785	172,622	45
" Talagang ..	..	2,804	234,094	236,898	175,316	121,096	218,364	514,776	751,674	88,375	76

NOTE.—These figures are taken from Table No. VIII of the Administration Report, except the last column, which is taken from Table No. I of the same Report.

Table No. XV, showing TENURES held direct from Government as they stood in 1878-79.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	WHOLE DISTRICT.				TAHSIL JHELAM.				TAHSIL PIND DADAN KHAN.				TAHSIL CHAKWAL.				TAHSIL TALAGANG.			
NATURE OF TENURE.	No. of estates.	No. of villages.	No. of holders or shareholders.	Gross area in acres.	No. of estates.	No. of villages.	No. of holders or shareholders.	Gross area in acres.	No. of estates.	No. of villages.	No. of holders or shareholders.	Gross area in acres.	No. of estates.	No. of villages.	No. of holders or shareholders.	Gross area in acres.	No. of estates.	No. of villages.	No. of holders or shareholders.	Gross area in acres.
A.—ESTATES NOT BEING VILLAGE COMMUNITIES, AND PAYING IN COMMON (ZAMINDARI).																				
III.—Paying 1,000 to 5,000 revenue. Held by individuals under the law of primogeniture.	14	14	39	20,315	4	4	9	8,148	3	3	8	8,355	5	5	16	2,318	2	2	6	1,494
IV.—Paying 1,000 rupees revenue and under. As above ..	8	8	15	34,156	2	2	4	10,295	3	3	4	12,348	2	2	4	8,045	1	1	3	3,418
PROPRIETARY CULTIVATING VILLAGE COMMUNITIES.																				
B.—Zamindari .. Paying the revenue and holding the land in common..	13	13	26	22,510	5	5	8	8,245	3	3	8	8,048	3	3	7	3,075	2	2	3	2,243
C.—Pattidari .. The land and revenue being divided upon ancestral or customary shares, subject to succession by the law of inheritance.	122	122	5,803	283,148	45	45	2,100	95,342	45	45	1,903	83,220	22	22	900	62,148	10	10	900	42,438
D.—Bhayachara .. In which possession is the measure of right in all lands	749	749	41,373	15,61,433	358	358	22,395	590,763	150	150	12,995	480,545	200	200	5,270	344,362	41	41	713	145,762
E.—Mixed or imperfect pattidari or bhayachara. In which the lands are held partly in severalty and partly in common, the measure of right in common land being the amount of the share or the extent of land held in severalty.	60	60	4,710	183,365	22	22	1,200	69,560	18	18	1,705	35,971	15	15	1,500	45,345	5	5	305	32,489
F.—Grantees of Government not falling under any previous class, and paying revenue direct to Government in the position of :—																				
II.—*Lessees*	7	7	16	39,972	2	2	4	20,122	3	3	4	10,205	1	1	4	5,310	1	1	4	4,335
I.—*Government waste, reserved or unassigned* ..	100	..	..	..	15	..	..	..	30	..	..	..	30	..	..	..	25	..	..	..
TOTAL ..	1,073	973	51,982	21,44,854	453	438	25,720	802,475	255	225	16,627	639,592	278	248	7,701	470,603	87	62	1,934	232,184

NOTE.—These figures are taken from Table No. XXXIII of the Revenue Report for 1878-79.

Table No. XVI, showing TENURES not held direct from Government as they stood in 1878-79.

1	2	3	4	5	6	7	8	9	10	11
	District Jhelam.		*Tahsil Jhelam.*		*Tahsil Pind Dadan Khan.*		*Tahsil Chakwal.*		*Tahsil Talagang.*	
NATURE OF TENURE.	No. of holdings.	Acres of land held.	No. of holdings.	Acres of land held.	No. of holdings.	Acres of land held.	No. of holdings.	Acres of land held.	No. of holdings.	Acres of land held.
A.—TENANTS WITH RIGHT OF OCCUPANCY.										
I. Paying rent in cash. (a) Paying the amount of Government revenue only to the proprietors.	1,011	5,865	312	1,313	423	1,130	275	3,105	1	317
(b) Paying such amount, plus a cash Malikanah ..	14,161	66,449	7,011	7,260	3,011	4,130	2,032	26,125	2,107	28,934
(c) Paying at stated cash rates per acre ..	1,087	8,600	254	2,988	114	3,245	536	1,304	183	1,063
(d) Paying lump sums (cash) for their holdings ..	9	146	3	50	2	29	2	45	2	22
Total paying rent in cash ..	16,268	81,060	7,580	11,611	3,550	8,534	2,845	30,579	2,293	30,336
II. Paying rent in kind. (a) Paying a stated share of the produce in kind. (1) Paying ½ produce and more ..	5,963	28,651	1,246	3,074	2,026	9,007	1,760	13,024	931	3,546
(2) ⅓ produce and less than ½ produce ..	1,121	14,788	510	5,026	111	1,016	299	5,025	201	3,721
(3) ¼ " " ⅓ " ..	158	2,431	80	824	12	515	56	323	10	769
(4) ⅕ " " ¼ " ..	53	273	12	116	16	95	17	18	8	44
Total paying rent in kind ..	7,295	46,143	1,848	9,040	2,165	10,633	2,132	18,390	1,150	8,080
GRAND TOTAL of Tenants with rights of occupancy ..	23,563	127,203	9,428	20,651	5,715	19,167	4,977	48,969	3,443	38,416
C.—TENANTS-AT-WILL.										
I. Paying in cash	13,770	26,778	3,421	7,526	5,716	9,027	2,227	5,898	2,406	4,327
II. Paying in kind. (a) ½ produce and more	31,649	85,632	11,026	22,616	9,028	19,407	7,216	23,007	4,379	20,602
(b) less than ½ produce	5,266	49,149	1,999	14,420	580	12,300	1,626	12,012	1,061	10,417
D.—PARTIES HOLDING AND CULTIVATING SERVICE-GRANTS FROM PROPRIETORS FREE OF ALL REVENUE.										
I. Sankalap or Dharmarth	2	7	..	..	..	..	2	7	..	..
II. Conditional on service	28	110	..	..	10	20	10	20	8	70
GRAND TOTAL OF TENURES ..	74,278	288,879	25,874	65,213	21,049	59,921	16,058	89,913	11,297	73,832

NOTE.—These figures are taken from Table No. XXXIV of the Revenue Report.

Table No. XVII, showing GOVERNMENT LANDS.

1	2	3	4	5	6	7	8	9
	No. of estates.	Total acres.	Acres held under cultivating leases. Cultivated.	Acres held under cultivating leases. Uncultivated.	Remaining acres. Under Forest Department.	Remaining acres. Under other Departments.	Remaining acres. Under Deputy Commissioner.	Average yearly income, 1877-78 to 1881-82.
Whole District ..	76	2,97,107	2,044	8,059	2,29,095	792	57,117	19,186
Tahsil Jhelam ..	21	99,633	151	2,687	86,063	792	9,940	..
„ Pind Dadan Khan ..	21	1,18,945	827	1,606	95,353	..	21,159	..
„ Chakwal ..	14	36,922	735	2,836	25,822	..	7,529	..
„ Talagang ..	20	41,607	331	930	21,857	..	18,489	..

NOTE.—These figures are taken from Table No. IX of the Revenue Report of 1881-82.

Table No. XVIII, showing FORESTS.

1	2	3	4	1	2	3	4
Name of Forest.	Area in square miles. Reserved.	Area in square miles. Protected.	Area in square miles. Unreserved.	Name of Forest.	Area in square miles. Reserved.	Area in square miles. Protected.	Area in square miles. Unreserved.
Salt Range ..	117	..	..	Belas on Jhelam River	..	..	½
Islands on Jhelam ..	2	..	..	Salt Range Rakhs ..	..	..	311

NOTE.—These figures are taken from Table No. XLIX of the Forest Report for 1881-82.

Table No. XIX, showing LAND ACQUIRED by GOVERNMENT.

Purpose for which acquired.	Acres acquired.	Compensation paid, in rupees.	Reduction of revenue, in rupees.
Roads ..	2,339	9,368	2,329
Canals ..	62	428	103
State Railways ..	1,107	48,524	299
Guaranteed Railways ..	..	..	..
Miscellaneous ..	364	11,302	320
Total ..	3,872	69,622	3,051

NOTE.—These figures are taken from Table No. XI of the Revenue Report.

Table No. XX, showing ACRES UNDER CROPS.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
YEARS.	Total.	Rice.	Wheat.	Jawar.	Bajra.	Makai.	Jau.	Gram.	Moth.	Poppy.	Tobacco.	Cotton.	Indigo.	Sugarcane.	Vegetables.
1873-74 ..	887,126	2,661	393,489	39,377	240,228	3,887	48,074	14,236	42,141	65	763	22,294	..	214	1,
1874-75 ..	936,959	1,972	430,603	44,673	23,987	2,371	32,313	26,781	47,753	75	1,253	31,604	..	201	7,
1875-76 ..	859,030	1,453	408,140	42,478	198,872	2,500	36,780	48,621	27,284	42	665	19,313	..	313	
1876-77 ..	835,497	233	480,273	30,603	129,998	2,423	17,879	34,115	34,617	81	622	25,557	..	414	3,
1877-78 ..	728,147	240	492,170	20,100	40,600	2,450	18,130	35,910	22,650	82	630	15,500	..	340	3,
1878-79 ..	738,855	450	496,000	15,100	30,500	2,000	38,135	30,000	20,000	80	600	20,000	..	300	3,
1879-80 ..	950,011	500	418,800	50,000	194,000	2,000	39,500	40,000	80,000	50	700	7,000	..	50	5,
1880-81 ..	797,856	2,205	395,990	48,595	163,055	3,597	41,996	15,284	37,142	42	784	10,210	..	265	1,
1881-82 ..	822,322	2,959	293,908	52,208	230,903	3,573	50,521	50,076	37,367	20	868	21,765	..	285	3,
NAME OF TAHSIL.	TAHSIL AVERAGES FOR THE FIVE YEARS, FROM 1877-78 TO 1881-82.														
Jehlam ..	1,020,450	3,530	513,383	45,706	161,510	5,202	50,321	25,600	60,050	88	1,050	18,910	..	375	5,
P. D. Khan	929,224	2,824	429,836	45,750	145,018	5,007	59,000	25,600	52,667	131	1,268	30,300	..	865	7,
Chakwal ..	1,080,019	..	539,714	51,900	225,741	2,345	45,803	38,376	51,350	35	820	16,100	..	..	3,
Talagang ..	1,007,498	..	613,985	42,647	126,789	1,066	33,156	80,794	33,092	20	444	9,165	..	..	1,
TOTAL ..	4,037,191	6,354	2,096,868	186,003	659,058	13,620	188,277	170,370	197,159	274	3,582	74,475	..	1,240	18

NOTE.—These figures are taken from Table No. XLIV of the Administration Report.

Table No. XXVI, showing RETAIL PRICES.

1	2		3		4		5		6		7		8		9		10		11		12		13		14		15		16	
	Number of seers and chitanks per rupee.																													
Year.	Wheat.		Barley.		Gram.		Indian corn.		Jawar.		Bajra.		Rice (fine).		Urd dal.		Potatoes.		Cotton. (cleaned).		Sugar (refined).		Ghi (cow's).		Firewood.		Tobacco.		Salt (Lahori).	
	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
1861-62 ..	14	..	17	11	14	..	17	1	17	11	18	10	5	9	12	2	..	..	2	13	2	5	2	5	139	15	8	6	12	2
1862-63 ..	32	10	48	8	37	5	40	8	35	7	34	8	6	8	18	10	..	..	2	9	2	9	2	1	136	10	8	6	10	15
1863-64 ..	31	11	47	2	36	6	46	10	40	2	40	2	6	8	16	13	..	..	1	10	2	9	2	5	130	10	11	3	10	12
1864-65 ..	27	1	34	8	27	1	31	11	30	13	30	13	6	8	14	15	..	..	1	6	2	13	2	1	130	10	7	7	10	4
1865-66 ..	23	5	38	5	22	6	31	11	29	14	31	11	6	8	16	13	..	..	2	9	2	13	1	14	111	15	7	7	10	8
1866-67 ..	24	4	36	6	24	4	33	9	28	15	28	15	6	8	17	11	..	..	2	13	2	9	1	10	111	15	7	7	10	8
1867-68 ..	18	10	19	9	16	13	24	11	20	8	20	8	5	9	14	15	..	..	2	13	2	5	1	10	111	15	7	7	10	4
1868-69 ..	13	1	17	11	14	..	15	14	13	1	12	2	6	8	9	5	..	..	2	5	2	1	1	6	121	5	7	7	10	4
1869-70 ..	12	2	17	11	9	5	16	13	10	4	12	2	4	3	8	6	..	..	1	14	2	1	1	10	111	15	7	7	10	4
1870-71 ..	14	15	19	9	12	2	20	1	20	8	20	8	4	10	14	..	..	..	2	1	1	14	1	10	74	10	5	9	10	4
1871-72 ..	20	..	25	..	17	..	28	..	25	..	25	..	5	..	13	8	12	..	2	6	2	4	1	9	100	..	8	..	11	..
1872-73 ..	19	8	25	..	17	..	24	..	24	..	24	..	5	..	11	..	12	..	2	8	2	4	1	10	100	..	8	..	11	..
1873-74 ..	16	4	23	..	22	8	20	..	22	..	21	..	5	..	14	..	13	..	2	8	2	8	1	14	100	..	8	..	11	..
1874-75 ..	28	..	42	..	34	..	34	..	32	..	37	..	5	..	15	..	25	..	2	12	2	12	2	..	100	..	10	..	11	..
1875-76 ..	28	..	31	..	25	..	30	..	31	..	35	..	5	..	14	..	16	..	2	4	2	8	1	14	120	..	9	..	11	..
1876-77 ..	34	..	40	..	35	..	34	..	36	..	39	..	6	..	16	..	16	..	2	12	3	..	1	12	60	..	8	..	11	..
1877-78 ..	14	4	15	12	15	4	16	..	18	..	15	..	5	..	8	..	12	..	2	4	3	..	1	12	60	..	9	..	11	..
1878-79 ..	14	..	25	..	12	8	15	..	15	..	16	..	5	..	9	..	10	..	3	..	2	..	1	6	110	..	12	..	11	8
1879-80 ..	11	12	16	..	15	..	14	8	14	8	14	..	5	..	11	8	10	..	2	6	2	4	1	6	90	..	7	..	12	8
1880-81 ..	15	..	20		16	8	18	..	19	..	16	..	5	..	15	..	11	..	2	..	2	4	1	6	90	..	7	..	13	..
1881-82 ..	17	8	27	4	23	..	22	..	22	..	21	..	5	..	13	..	10	..	2	12	2	4	1	9	90	..	7	..	13	..

NOTE.—The figures for the first ten years are taken from a statement published by Government (Punjab Government No. 209 S. of 19th August 1872), and represent the average prices for the 12 months of each year. The figures for the last ten years are taken from Table No. XLVII of the Administration Report, and represent prices as they stood on the 1st January of each year.

Table No. XXVII, showing PRICE of LABOUR.

1	2	3	4	5	6	7	8	9	10	11	12	13
YEAR.	WAGES OF LABOUR PER DAY.				CARTS PER DAY.		CAMELS PER DAY		DONKEYS PER SCORE PER DAY.		BOATS PER DAY.	
	Skilled.		*Unskilled.*									
	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
1868-69 ..	0 6 0	0 4 0	0 3 0	0 2 0	2 2 0		0 8 0	0 6 0	3 12 0		2 4 0	1 0 0
1873-74 ..	0 10 0	0 6 0	0 4 0	0 2 6	2 0 0		0 8 0	0 6 0	3 12 0	3 0 0	2 4 0	1 0 0
1878-79 ..	0 10 0	0 6 0	0 4 0	0 2 6	2 0 0	1 0 0	0 8 0	0 6 0	3 12 0		2 4 0	1 0 0
1879-80 ..	0 10 0	0 6 0	0 4 0	0 2 6	2 0 0	1 0 0	0 8 0	0 6 0	3 12 0		2 4 0	1 0 0
1880-81 ..	0 10 0	0 6 0	0 4 0	0 2 6	2 0 0	1 0 0	0 8 0	0 6 0	3 12 0		2 1 0	1 0 0
1881-82 ..	0 10 0	0 6 0	0 4 0	0 2 6	2 0 0	1 0 0	0 8 0	0 6 0	3 12 0		2 1 0	1 0 6

NOTE.—These figures are taken from Table No. XLVIII of the Administration Report.

Table No. XXVIII, showing REVENUE COLLECTED.

1	2	3	4	5	6	7	8	9
YEAR.	Fixed Land Revenue.	Fluctuating and Miscellaneous Land Revenue.	Tribute.	Local rates.	EXCISE.		Stamps.	Total Collections.
					Spirits.	Drugs.		
1868-69	5,69,216	10,916	..	..	7,916	1,893	35,615	6,25,556
1869-70	5,77,136	28,377	..	..	9,624	2,770	37,856	6,55,763
1870-71	5,73,228	30,110	..	..	9,094	2,129	39,359	6,53,920
1871-72 . ..	5,77,519	28,773	..	38,943	13,065	3,210	42,156	7,03,666
1872-73	5,80,349	14,761	..	39,262	11,585	3,498	46,315	6,95,770
1873-74	5,83,860	12,856	..	39,375	11,299	5,142	52,483	7,05,015
1874-75	5,84,583	13,459	..	39,466	10,634	4,593	57,417	7,10,152
1875-76	5,85,789	9,826	..	39,292	10,247	3,535	57,116	7,05,805
1876-77	5,84,882	8,691	..	39,281	11,482	4,767	58,123	7,07,226
1877-78	5,81,785	8,210	..	38,996	11,540	5,020	66,730	7,12,281
1878-79	5,77,615	6,752	..	51,675	12,405	4,930	73,419	7,26,796
1879-80	5,73,781	7,202	..	47,033	15,716	6,475	89,236	7,39,443
1880-81	6,91,217	96,492	..	60,502	18,407	6,789	96,997	9,70,404
1881-82	6,90,327	13,557	..	56,382	16,982	6,967	1,01,500	8,85,715

NOTE.—These figures are taken from Table No. XLIV of the Revenue Report. The following revenue is excluded:—"Canal, Forests, Customs and Salt, Assessed Taxes, Fees, Cesses."

Table No. XXIX, showing REVENUE DERIVED from LAND.

1	2	3	4	5	6	7	8	9	10	11	12	13
YEAR.	Fixed land revenue (demand).	Fluctuating and miscellaneous land revenue (collections).	FLUCTUATING REVENUE.					MISCELLANEOUS REVENUE.				
			Revenue of alluvial lands.	Revenue of waste lands brought under assessment.	Water advantage revenue.	Fluctuating assessment of river lands.	Total fluctuating land revenue.	*Grazing dues.* By enumeration of cattle.	*Grazing dues.* By grazing leases.	Sale of wood from rakhs and forests.	Sajji.	Total miscellaneous land revenue.
District Figures.												
Total of 5 years—1868-69 to 1872-73 ..	29,10,822	1,12,937	25,846	..	..	..	30,638	17,320	53,456	5,427	..	82,299
Total of 5 years—1873-74 to 1877-78 ..	29,42,986	53,042	11,061	1,048	..	..	15,853	14,554	12,812	393	..	37,159
1878-79 ..	5,83,155	6,752	285	..	..	..	958	2,710	1,849	3	..	5,794
1879-80 ..	5,82,272	6,933	404	..	..	..	1,392	2,629	2,157	19	..	5,541
1880-81 ..	6,93,174	96,457	..	..	..	..	55,808	2,061	2,230	1	..	41,149
1881-82 ..	6,94,836	10,401	4,106	..	..	..	4,512	..	2,857	27	..	5,889
Tahsil Totals for 5 years—1877-78 to 1881-82.												
Tahsil Jhelam ..	8,46,956	37,550	2,338	..	..	..	19,293	..	1,098	22	..	18,257
" Pind Dadan Khan ..	8,90,622	31,155	3,016	242	..	..	13,852	5,010	..	3	..	17,303
" Chakwal ..	9,37,438	33,254	..	..	..	..	16,420	2,417	1,984	..	..	16,834
" Talagang ..	4,66,210	33,142	..	..	..	..	14,131	2,623	8,207	325	..	19,011

NOTE.—These figures are taken from Tables Nos. I and III of the Revenue Report.

Table No. XXX, showing ASSIGNED LAND REVENUE.

1	2	3	4	5	6	7	8	9	10	11
	TOTL AREA AND REVENUE ASSIGNED.								PERIOD OF ASSIGNMENT.	
TAHSIL.	*Whole Villages.*		*Fractional parts of Villages.*		*Plots.*		*Total.*		*In perpetuity.*	
	Area.	Revenue.	Area.	Revenue.	Area.	Revenue.	Area.	Revenue.	Area.	Revenue.
Jhelam ..	2,920	1,440	2,630	1,478	253	290	5,803	3,208	1,254	803
Pind Dadan Khan ..	7,398	3,395	1,598	1,209	2,938	4,468	11,934	9,162	7,623	4,264
Chakwal ..	3,756	1,455	566	453	2,047	1,409	6,369	3,317	2,969	1,749
Talagang ..	36,088	4,242	3,922	1,994	2,108	1,313	42,118	7,549	33,459	4,364
Total District ..	50,162	10,532	8,716	5,224	7,346	7,480	66,224	23,236	45,305	11,180

	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	PERIOD OF ASSIGNMENT.—*Concluded.*								NUMBER OF ASSIGNEES.					
TAHSIL.	*For one life.*		*For more lives than one.*		*During maintenance of Establishment.*		*Pending orders of Government.*							
	Area.	Revenue.	Area.	Revenue.	Area.	Revenue.	Area.	Revenue.	In perpetuity.	For one life.	For more lives than one.	During maintenance.	Pending orders.	TOTAL.
Jhelam ..	1,916	1,515	1,879	480	754	410	..	..	2	51	11	24	..	88
Pind Dadan Khan ..	2,906	3,499	900	368	505	1,031	..	..	18	75	7	13	..	113
Chakwal ..	1,328	890	1,866	490	206	188	..	..	55	57	12	11	..	135
Talagang ..	7,457	2,775	1,157	390	45	20	..	..	24	31	3	16	..	74
Total District ..	13,607	8,679	5,802	1,728	1,510	1,649	..	..	99	214	33	64	..	410

NOTE.—These figures are taken from Table No. XII of the Revenue Report for 1881-82.

Table No. XXXI, showing BALANCES, REMISSIONS and TAKAVI.

YEAR.	*Balances of land revenue in rupees.* Fixed revenue.	*Balances of land revenue in rupees.* Fluctuating and miscellaneous revenue.	Reductions of fixed demand on account of bad seasons, deterioration, &c., in rupees.	Takavi advances in rupees.
1868-69	10,690	..	..	5,339
1869-70	3,056	..	741	7,847
1870-71	9,265	..	..	1,240
1871-72	5,316	..	..	2,235
1872-73	5,047	..	..	1,700
1873-74	3,477	..	..	200
1874-75	3,455	..	..	600
1875-76	5,393	666	185	423
1876-77	3,758	180	..	303
1877-78	6,004	50	..	1,014
1878-79	5,540	269	500	922
1879-80	8,491	90	..	724
1880-81	1,957	3,175	..	158
1881-82	4,623	2,208	..	1,715

NOTE.—These figures are taken from Tables Nos. I, II, III, and XVI of the Revenue Report.